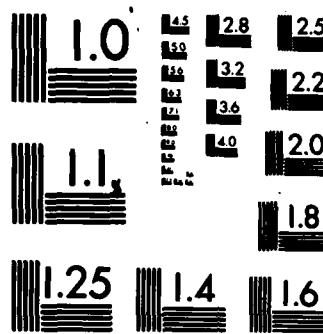


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RESULTS OF A RESEARCH STUDY
TO
IDENTIFY HISTORICAL PROCUREMENT OBLIGATIONS AND EXPENDITURES
ON
MAJOR ARMY MATERIEL AND NON-MATERIEL SYSTEMS

MAY 1983

DCA-P-95

COST ANALYSIS DIVISION
U. S. ARMY FINANCE AND ACCOUNTING CENTER

APPROVED: W. M. Allen

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11. Results of a Research Study to Identify Historical Procurement Obligations and Expenditures on Army Materiel and Non-Materiel Systems. (UNCLASSIFIED)

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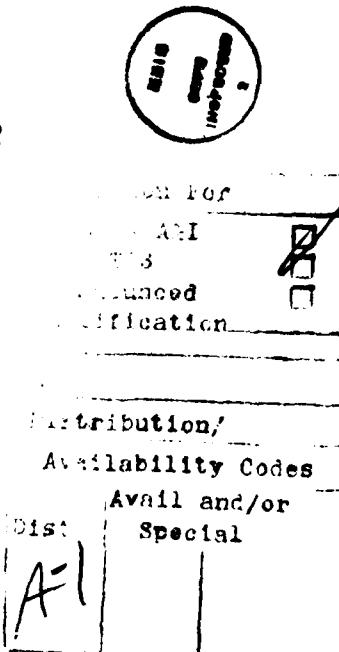


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EXECUTIVE SUMMARY

RESULTS OF A RESEARCH STUDY TO IDENTIFY HISTORICAL PROCUREMENT OBLIGATIONS AND EXPENDITURES ON MAJOR ARMY MATERIEL AND NON-MATERIEL SYSTEMS

PURPOSE OF STUDY. This study was conducted as part of a continuing effort to obtain actual (historical) life cycle costs of major Army systems from the Army's finance and accounting data. An hypothesis was formulated and tested concerning the ability of Budget Line Item Numbers (BLIN's) to be used in identifying total procurement costs of major Army systems, with a view to determining the feasibility of restructuring/redefining BLIN's to assist in collecting/tracking those costs.

ACTIONS. Efforts included research of rules and practice on assignment and structure of BLIN's, development of correlation tables relating BLIN's to the total Army, and formulation of three alternative approaches to obtaining materiel and non-materiel system procurement costs.

FINDINGS. BLIN's do not identify total procurement costs by major Army systems, although they do identify a significant portion of a system's cost. A system can be represented by multiple BLIN's within an appropriation; one or more of a system's BLIN's may be found in other appropriations; and, one BLIN may represent portions of many systems' costs.

a. The primary cause of system funds fragmentation is the Budget Activity/Subactivity Structure which effectively separates a system from its modifications, spares and repair parts, and support equipment and facilities. Since the location of Budget Line Items in Exhibit P-1 (Supporting Data for the President's Budget) is determined by Budget Structure, and since the BLIN Serial Number is taken from that document, the BLIN's reflect the same funds fragmentations of systems.

b. As a consequence of fragmentation, it became necessary to locate a set of "rules" which could be used to define a "system." The set located and utilized yielded a list of systems that was both totally exhaustive and mutually exclusive in capturing the total Army.

c. BLIN's can be "tracked" for only five years. At the end of the fifth year, any funds not disbursed are placed in "M" accounts by appropriation. After the balances are merged, funds may be disbursed to satisfy Government liabilities; however, transactions cannot be associated with a BLIN. Thus, life cycle procurement costs of a system are not available even though the system is well-defined.

RESTRUCTURE. Three alternative BLIN architectures were developed to examine ways to improve historical data collection. The first approach does not involve restructure; rather, it uses the current BLIN, augmented by data in other PPBES documents, to obtain an approximation of major materiel systems' total procurement costs. The second approach addresses a change in Budget

Structure; and the third, which initially was to be a natural extension of Approach #2, proved to be just another "stovepipe" when what really is needed is a common architecture and language. Therefore, Approach #3 became the continuing effort to insure that the Army Management Structure (Redesign) (AMS(R)) maintains the matrix concept, the components remain managerially relevant, and the System Component is totally exhaustive while its subcomponents are mutually exclusive.

CONCLUSIONS. BLIN's perform the function of controlling procurement funds. It is questionable, however, as to whether they tell how well program and budget execution applies resources to achieve intended purposes. If BLIN's are expected to provide total procurement costs visibility by major systems, they currently fail this function.

RESULTS OF A RESEARCH STUDY
TO
IDENTIFY HISTORICAL PROCUREMENT OBLIGATIONS AND EXPENDITURES
ON
MAJOR ARMY MATERIEL AND NON-MATERIEL SYSTEMS

CHAPTER 1
INTRODUCTION

1-1. Purpose. The purpose of this report is to provide the results of a study conducted to determine the ability of the current Budget Line Item Numbers (BLIN's) to identify procurement costs of major Army systems, with a view to determining the feasibility of restructuring/redefining BLIN's to assist in collecting/tracking those costs.

1-2. Background. The Army has a need to link downstream "execution" (accounting data which come from the finance and accounting system) with upstream "deciding" (cost data which come from the cost estimating and analysis system), i.e., a feedback mechanism. The Army's finance and accounting system evolved along lines required to report financial information by appropriation (funds accounting). However, managers within the Army need information that is system-oriented and that, by necessity, cuts across appropriation lines. Efforts to date to obtain the actual (historical) life cycle costs of major Army systems have not been successful, but attention recently has been directed toward the possibility that a significant portion of a system's life cycle costs could be captured if its procurement BLIN's could be identified. The Army has six separate procurement appropriations which may or may not contain BLIN's (Aircraft, Missiles, Weapons and Tracked Combat Vehicles, Ammunition, Other Procurement, and National Guard). Since the first four are structured by system class, they hold the promise of providing procurement costs by system, especially the costs of those major Army materiel systems which are subject to Congressional calls for quarterly reports - the Selected Acquisition Reports (SAR's). Therefore, as part of a continuing effort to obtain major materiel and non-materiel system costs, a research project was initiated to study the current procurement BLIN's to determine their ability to provide cost data feedback and to devise, if feasible, an architecture for restructuring/redefining BLIN's to facilitate historical cost data collection.

1-3. Description of the Study. The study was conducted during the second quarter of FY 83, by analysts in the Cost Analysis Division, USAFAC, under the direction of the Chief, Mr. Noel B. Summers, Jr. The Point of Contact for this report is Mrs. Dina R. Philips. Alternate is Mrs. Mary Carson. POC's telephone number is AUTOVON 699-2674.

a. Objectives.

(1) Develop insights and information on the assignment and structure

of procurement BLIN's and their interface with related resource management systems. Produce appropriate flow diagrams.

(2) Develop correlation tables to relate BLIN's to the total Army, with emphasis on Selected Acquisition Report (SAR) systems.

(3) Develop an architecture which could be used to restructure/redefine BLIN's.

b. Scope. The Army has two procurement programs, the Direct Program and the Customer (Reimbursable) Program. This study addresses the FY 83 BLIN's in the Direct Program (procured for the Army) as opposed to the FY 83 BLIN's in the Customer Program (procured for other U.S. Government agencies, Foreign Governments, etc.).¹

c. Initial Hypotheses.

(1) BLIN's, as currently defined, do not identify the total procurement costs of major Army systems; however, they can identify a significant portion of those costs.

(2) BLIN's can be restructured/redefined such that they can identify total procurement costs of major Army systems.

(3) Implementation of the new architecture could be achieved legally and with minimal turbulence.

¹Items procured by the Army for the National Guard and Reserve would be included in the Direct Program; however, there were no FY 83 BLIN's in Appropriation #2036, National Guard. The funds appropriated by Congress for this purpose were apportioned to the Office of the Secretary of Defense (OSD) and are being controlled in Appropriation #0350 as a Transfer to the Army. Although there were no BLIN's available to this study, further efforts to determine procurement costs of Army systems should involve inclusion of items procured for the Army National Guard and Reserve.

CHAPTER 2

CURRENT BLIN ARCHITECTURE

2-1. What is a BLIN? It is a six- or seven-position alphanumeric code which is established and used during budget execution to control procurement funds. BLIN's do not appear in the President's Budget.

2-2. Schemata. The BLIN's in the Army Procurement Appropriations Management Accounting and Reporting System (APARS) have six positions. The coding schema (see Figure 2-1) provides the Fiscal Year, the Program, the Appropriation, and the BLIN Serial Number. The BLIN Serial Number (BSN) is the line number of the Budget Line Item (BLI) transferred directly from Exhibit P-1 (Supporting Data for the President's Budget). Figure 2-2 gives the coding schema that is used in the Program and Funds Control System (PFCS). The Program indicator (position 2) is an alpha character (D) for Direct Program instead of a zero (0). The extra position (4) is a Subsequence Designator that is used when a BLI is broken out to more than one organization.

2-3. BLIN Life Cycle. BLIN's have a five-year "life cycle". During the first three years the funds can be obligated and disbursements made. However, during the last two years of the BLIN's life, disbursements can be made but further new obligations cannot be made. Disbursements against the specific BLIN are still "tracked" during the fourth and fifth years. Then, at the end of the fifth year, any funds not disbursed are placed in an "M" account. These "M" account numbers contain a "BLIN Serial Number" of 000, and function as successor accounts into which are merged the balances of closed appropriation accounts. Each account number also contains the Basic Number of the appropriation. After the balances are merged, funds are disbursed from the "M" accounts to satisfy Government liabilities; however, these disbursements are not "tracked" against the original BLIN's because they no longer exist.

CODING SCHEMA (APARS)

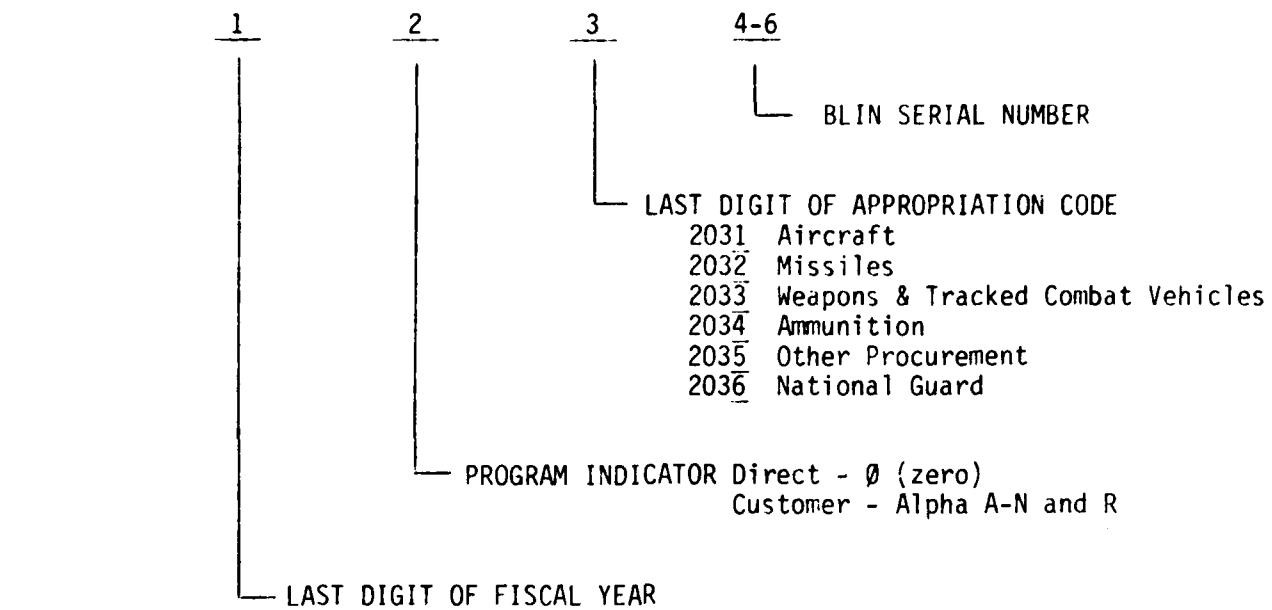


Figure 2-1

CODING SCHEMA (PFCS)

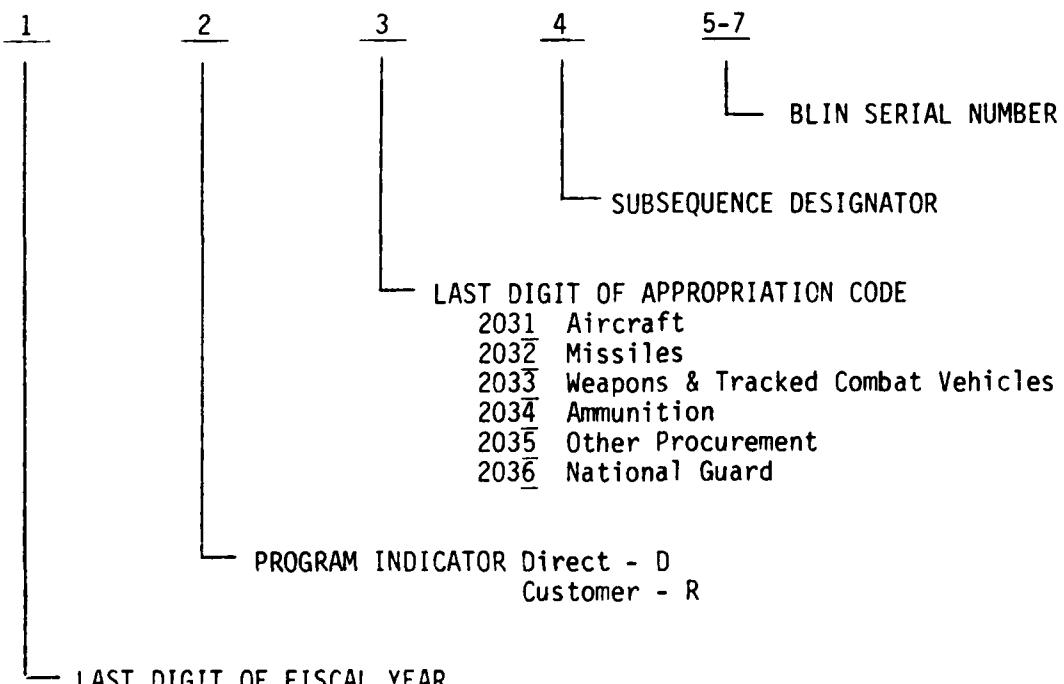


Figure 2-2

CHAPTER 3

INTERRELATIONSHIP OF THE BLIN TO THE PPBES

3-1. **Introduction.** The Army's Planning, Programming, Budgeting, and Execution System (PPBES) is a comprehensive, dynamic, and complex process. Its principal products are the Army Plan, the Five Year Defense Program, and the Budget. During the execution phase of the annual cycle, programs are executed and Army resources are managed. Although the Budget Line Item Number is established and exercised during execution, its structure largely is determined by events and activities which take place during previous stages. The intent of this chapter is to show the interrelationship of the BLIN to the PPBES.

3-2. **Rewrites to the PPBES Handbook.**

a. Prior to 1982, the name of the Army's primary resource management system was the Planning, Programming, and Budgeting System (PPBS). The execution phase was a part of the budgeting function. In 1982, when the third edition of the handbook was published, execution became a separate function and the name was changed to the Planning, Programming, Budgeting, and Execution System (PPBES):

"Army and other defense managers more and more perceive that emphasis on planning, programming, and budgeting overlooks an essential system ingredient. The three-phase focus, they believe, subordinates concern for how well program and budget execution applies resources to achieve intended purposes. As a first step to reemphasize the need to review program and budget execution, the Army has renamed its primary resource management system."²

b. Another major change in the system is the replacement of mission areas by the following which were structured around basic Army functions:³

FUNCTIONS

Structure
Man
Equip
Train
Mobilize
Deploy

²PPBES Handbook, 3d Ed., 1982, pps. xxv-xxvi

³Ibid. p. xvi

FUNCTIONS (Continued)

Sustain Provide Facilities

Current plans are to implement this change in the May 1983 Program Objective Memorandum (POM).

3-3. Planning. The principal product of the planning function is the Army Plan. It conveys guidance and establishes operational priorities for program construction, supporting preparation of command Program Analysis and Resource Review (PARR) documents and the Program Objective Memorandum (POM).

ARMY PLANNING CYCLE

<u>PHASE</u>	<u>PERIOD</u>	<u>PRODUCT</u>
Requirements planning	Mid-February to Mid-August	Army planning force requirements
Objectives planning	July to late August	Constrained objective force
Planning decision	Mid-September	The Army Plan

There is no direct relationship with the BLIN; however, the decisions made will determine programs and budgets which directly affect BLIN's.

3-4. Programming. The programming function translates planning decisions into a balanced allocation of forces, manpower, materiel, and funds. Each PPBES cycle advances the program one fiscal year. The baseline for each new cycle is the Army portion of the Five Year Defense Program (FYDP), the official summary of programs approved by the Secretary of Defense and reflected in the President's budget. Most of the continuing programs are safe from serious challenge; they form a program "core". Above the core, there is competition for the limited resources.

a. Program Development Increment Packages (PDIP's). Each core program is described by a PDIP. Above the core, other PDIP's which contain new undertakings or requirements contend for available manpower and dollars. PDIP's are ranked, integrated into a functional program, prioritized on the basis of functional analysis, and adjusted by the Program and Budget Committee (PBC) through program review. Program Budget Decisions (PBD's) help translate the approved program into budget estimates and distribute resources among Budget Activities (see Figure 3-1). There is no direct relationship between PDIP's and BLIN's.

b. Budget Activity Structure. The greatest impact on the BLIN develops from the Budget Activity Structure (see Table 3-1). In the Procurement Annex to the Five Year Defense Program (FYDP) and in Exhibit P-1 (Supporting Data for the President's Budget), entries are arranged by Budget Activity and Budget Subactivity. Although structure differs among appropriations, materiel systems generally are listed separately from their modifications, spares and repair parts, and support equipment and facilities. Further, spares and

PDIP → PROGRAM → BUDGET

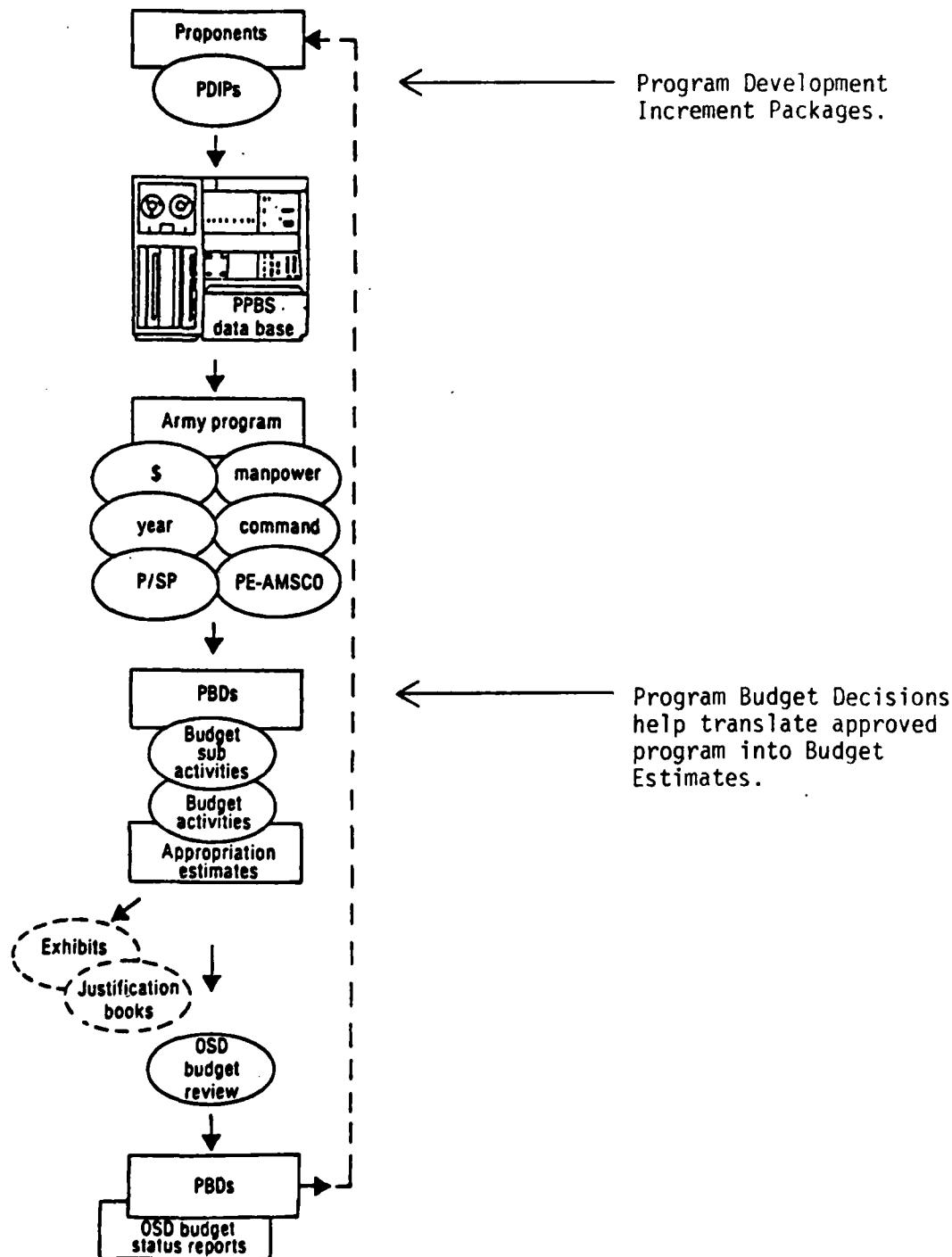


Figure 3-1

BUDGET ACTIVITY STRUCTURE

APPROPRIATION: 2031 - AIRCRAFT

- Budget Activity #1 - Aircraft
 - Subactivity - Fixed Wing
 - Subactivity - Rotary
- Budget Activity #2 - Modifications of Aircraft
 - Subactivity - Modifications of Aircraft
- Budget Activity #3 - Spares and Repair Parts
 - Subactivity - Spares and Repair Parts
- Budget Activity #4 - Support Equipment and Facilities
 - Subactivity - Other Support

APPROPRIATION: 2032 - MISSILES

- *Budget Activity #2 - Other Missiles
 - Subactivity - Surface to Air Missile System
 - Subactivity - Air to Surface Missile System
 - Subactivity - Anti-Tank/Assault Missile System
- Budget Activity #3 - Modifications
 - Subactivity - Modifications
- Budget Activity #4 - Spares and Repair Parts
 - Subactivity - Spares and Repair Parts
- Budget Activity #5 - Support Equipment and Facilities
 - Subactivity - Support Equipment and Facilities

APPROPRIATION: 2033 - WEAPONS AND TRACKED COMBAT VEHICLES

- Budget Activity #1 - Tracked Combat Vehicles
 - Subactivity - Tracked Combat Vehicles
 - Subactivity - Modification of Tracked Combat Vehicles
 - Subactivity - Support Equipment and Facilities
- Budget Activity #2 - Weapons and Other Combat Vehicles
 - Subactivity - Weapons and Other Combat Vehicles
 - Subactivity - Modifications of Weapons and Other Combat Vehicles
 - Subactivity - Support Equipment and Facilities

APPROPRIATION: 2034 - AMMUNITION

- Budget Activity #1 - Ammunition
 - Subactivity - Atomic Materiel
 - Subactivity - Conventional Ammunition
 - Subactivity - Miscellaneous
- Budget Activity #2 - Ammunition Production Base Support
 - Subactivity - Production Base Support

*There is no Budget Activity #1

Table 3-1

BUDGET ACTIVITY STRUCTURE (Continued)

APPROPRIATION: 2035 - OTHER PROCUREMENT

Budget Activity #1	- Tactical and Support Vehicles
Subactivity	- Tactical Vehicles
Subactivity	- Non-Tactical Vehicles
**Subactivity	- Modification of Vehicles
Subactivity	- Support Equipment and Facilities
Budget Activity #2	- Communications and Electronic Equipment
**Subactivity	- Telecommunications Equipment - Air Defense Communication
Subactivity	- Telecommunications Equipment - Readiness Cmd Comm
Subactivity	- Telecommunications Equipment - Joint Tactical Comm Prog
Subactivity	- Telecommunications Equipment - Combat Support Comm
**Subactivity	- Telecommunications Equipment - Cryptologic Comm
Subactivity	- Telecommunications Equipment - Alt Nat Mil Cmd Cen
Subactivity	- Telecommunications Equipment - NMCS Wide Support Comm
Subactivity	- Telecommunications Equipment - Starcom Non-DCS
Subactivity	- Telecommunications Equipment - Long-Haul Comm (DCS)
**Subactivity	- Telecommunications Equipment - Min Essent Emerg Comm Net
Subactivity	- Telecommunications Equipment - Satcom - Gnd Environ
Subactivity	- Telecommunications Equipment - Eucom C3 System
Subactivity	- Telecommunications Equipment - Comsec Equipment
Subactivity	- Telecommunications Equipment - Base Comm.
Subactivity	- Telecommunications Equipment - TMDE
Subactivity	- Other Elect Sys/Equip - Intelligence Support
**Subactivity	- Other Elect Sys/Equip - Equip - ASA
Subactivity	- Other Elect Sys/Equip - Gen Def Intel Prog
Subactivity	- Other Elect Sys/Equip - Auto Data Process Sys

Table 3-1

BUDGET ACTIVITY STRUCTURE (Continued)

Subactivity	- Other Elect Sys/Equip - Audio Visual
Subactivity	- Other Elect Sys/Equip - Electrionic Warfare
Subactivity	- Other Elect Sys/Equip - Tactical Electronics
**Subactivity	- Other Elect Sys/Equip - Mods Tactical Sys/Eq
Subactivity	- Other Elect Sys/Equip TMDE for Tactical Electronics
Subactivity	- Other Elect Sys/Equip Sup Equip and Fac
Budget Activity #3	- Other Support Equipment
Subactivity	- Combat Support Equipment
Subactivity	- Construction Equipment
Subactivity	- Floating and Rail Equipment
Subactivity	- Generators and Associated Equipment
Subactivity	- Materiel Handling Equipment
Subactivity	- Medical Support Equipment
**Subactivity	- Modification of In-Service Equipment
Subactivity	- Support Equipment and Facilities

APPROPRIATION: 2036 - NATIONAL GUARD EQUIPMENT

Budget Activity #1	- National Guard
Subactivity	- National Guard

**In Procurement Annex to the FYDP
but not in Exhibit P-1 for FY 83

Table 3-1

repair parts, support equipment, etc., are not available by system; the funds are commingled. This fragmentation of systems funds carries over to BLIN's, making it impossible to track the total procurement costs of a materiel or non-materiel system.

c. Procurement Annex. Entries in the Procurement Annex to the Five Year Defense Program provide more detailed information than do the Budget Line Items in Exhibit P-1 (Supporting Data for the President's Budget); the initial spares, for example, in some cases are reported by major materiel system. Consider the following entry from the Procurement Annex to the Five Year Defense Program:

M1 Abrams Tank	
Seq 1 10 1705	SSN G82916
Quantity (Each)	
Weapon Systems Cost	
Less Adv Proc Cur Yr	
Current Year Program	
Plus Adv Proc Cur Yr	
Total Current Year	
Initial Spares	
Procurement Cost	
ESC Total Cur Year	
ESC Initial Spares	

Replenishment spares and repair parts are not available by system. Later, in Exhibit P-1, data on initial spares by system also are lost.

d. Standard Study Number (SSN). The SSN, which appears in all entries in the Procurement Annex to the Five Year Defense Program and in Exhibit P-1, is used mainly in compiling data for reports. SSN's provide the capability of rolling together data on requirements, assets, procurement, and distribution for items of equipment and ammunition. The first four positions of an SSN indicate the item level used in preparing Exhibit P-1 (see Table 3-2). The SSN coding schema also provides further break-out levels (see Figure 3-2).

(1) The SSN, unlike the BLIN, does not change from fiscal year to fiscal year. SSN's are assigned when new materiel systems/major items are being developed and when new line item number (LIN) data appear in the Supply Bulletin (SB) 700-20 quarterly file. The SSN's are associated with the items until their retirement. DESCOM assigns, and DARCOM approves, the SSN's for items or programs requiring Army Acquisition Objective (AAO) computations. ODCSRDA assigns all others. For example, DESCOM assigned the following SSN's:

G82916	M1 Abrams Tank
G82915	Tank Combat FT 120MM Gun M1 Series

ODCSRDA assigned these SSN's:

GB1300	M1 Series Tank Training Devices
GA0700	Tank, M1 Series (Mod)

(2) Because the SSN is constant, it can provide the link between PDIP's and BLIN's where there is no direct relationship (see Figure 3-3). For

THE ARMY PROCUREMENT APPROPRIATIONS AND SSN RELATIONSHIPS

ARMY APPROPRIATION	TITLE	MAJOR ROLL CODE POSITIONS 1 THROUGH 4 OF THE SSN
Aircraft procurement	Aircraft and armament subsystem	A001-A999 F001-F999 H001-H999
	Support equipment to include avionic subsystem	J001-J999
Missile procurement	Antiballistic missile system	C001-C199
	Other missiles and support equipment	C200-C999 1001-1999
Procurement of Weapons and tracked combat vehicles	Tracked combat vehicles	G001-G199 G300-G999
Procurement of ammunition	Ammunition	E001-E999 N001-N999
Other Procurement	Tactical, support, and commercial vehicles	D001-D999
	Communications and electronic equipment: US Army Communications Electronics Materiel Readiness Command (CECOM);	U001-U999
	US Army Communications Security Logistics Agency (CSLA);	T001-T999
	US Army Electronics Materiel Readiness Activity (EMRA);	V001-V999
	Other	B001-B999 K001-K999 Y001-Y999 P001-P999
	Medical equipment: US Army Medical Materiel Agency (USAMMA);	Q001-Q999

Table 3-2

THE ARMY PROCUREMENT APPROPRIATIONS AND SSN RELATIONSHIPS (Continued)

ARMY APPROPRIATION	TITLE	MAJOR ROLL CODE POSITIONS 1 THROUGH 4 OF THE SSN
	Other support equipment	M001-M999 R001-R999 S001-S999 W001-W999 X001-X999

Table 3-2

SSN CODING SCHEMA

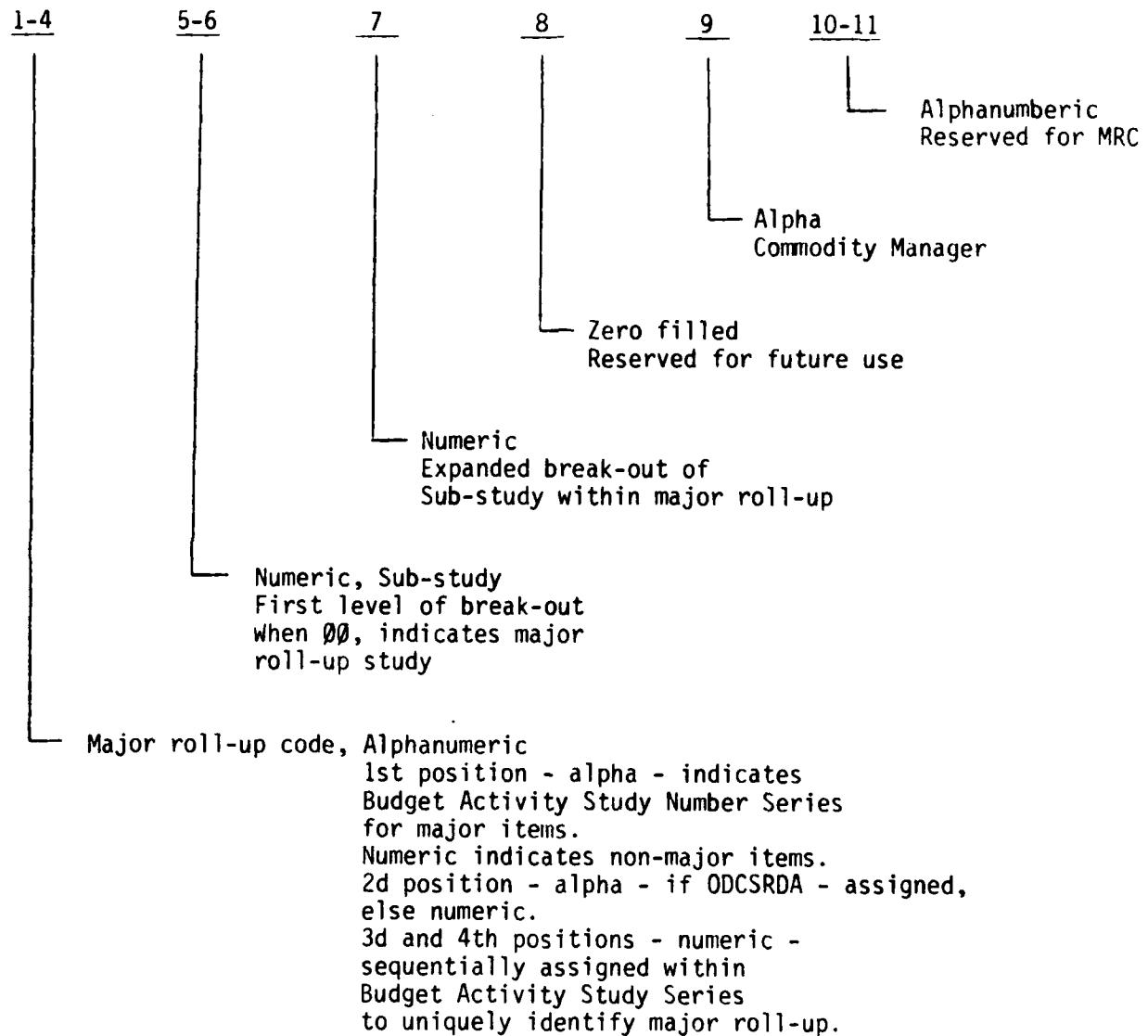


Figure 3-2

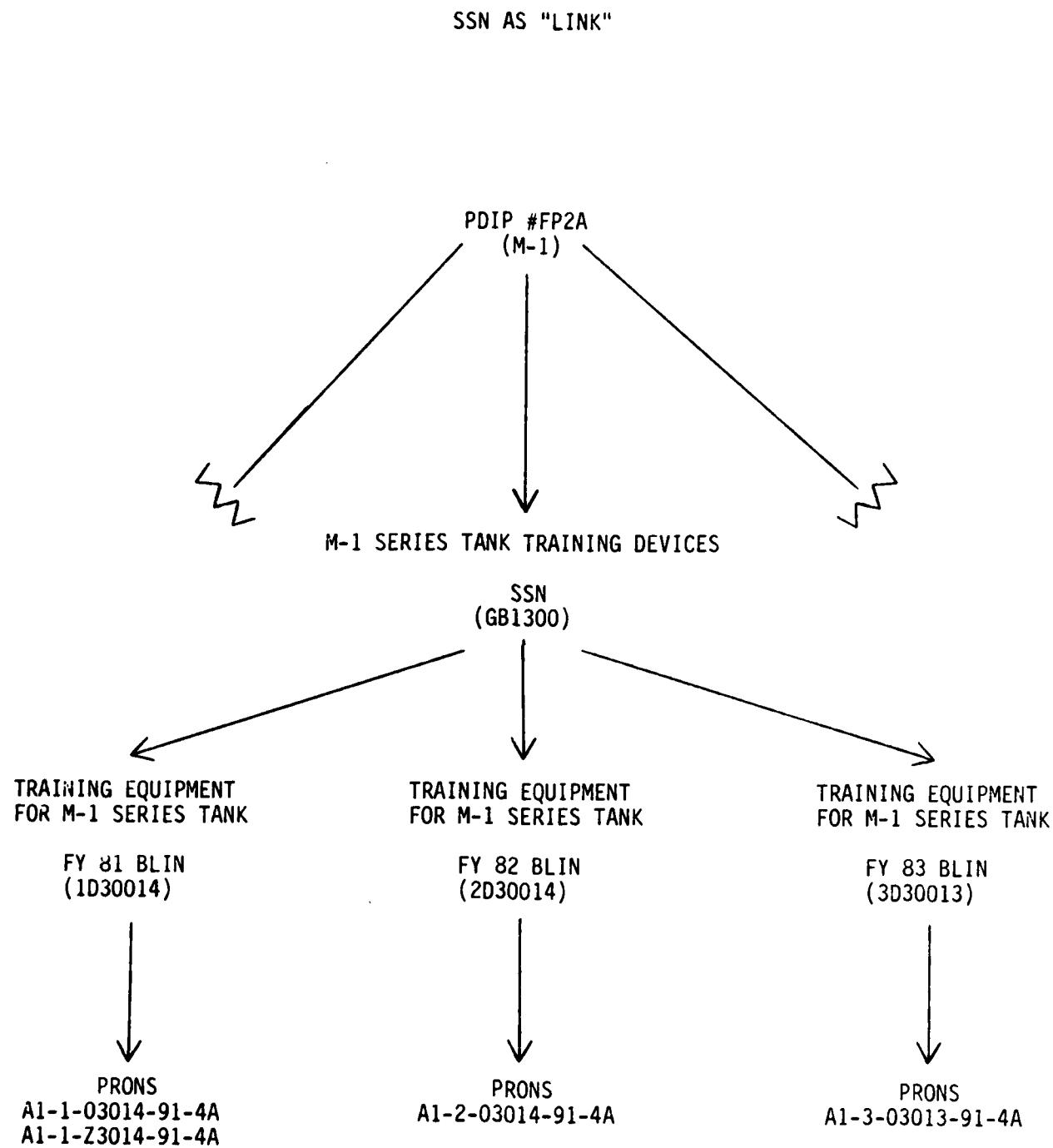


Figure 3-3

example, PDIP #FP2A is the system PDIP for the M1 Abrams Tank. One of the SSN's in this PDIP is GB1300, M1 Series Tank Training Devices. This SSN links the PDIP to the FY 83 BLIN, for example, which is Training Equipment for M1 Series Tank (BLIN 3D30013). This information is available from the Program and Funds Control System (PFCS). The system also will provide the Procurement Request Order Numbers (PRON's) associated with a BLIN.

e. Procurement Request Order Numbers (PRON's). The PRON is established for the management control and identification of program directives and work orders. It also is reflected in related cost and performance reports, contractual actions, status reports, and delivery reports. A portion of the BLIN is incorporated in the PRON, making it possible to associate the two numbers. One BLIN may relate to multiple PRON's (see Figure 3-3).

3-5. Budgeting. There are two stages in the budgeting phase: Budget Formulation which comprises development of Army budget estimates for review and approval as part of the President's budget, and Budget Justification which relates to the process of congressional review and approval. These activities express the program need for dollars and manpower as requests for congressional appropriations. Exhibit P-1 (Supporting Data for the President's Budget) contains the proposed procurement portion of the Army budget which is forwarded to the Office of the Secretary of Defense for inclusion in the OSD Budget.

a. OSD Sequence Number. Sequence numbers are used to "order" the line items in Exhibit P-1; that is, the items are placed within the appropriate Budget Activities/Subactivities in a specific arrangement. For example, numbers beginning with the digit "1" place the item under Budget Activity #1, etc.; the 2d and 3d digits determine the Budget Subactivity; and the last four numbers order the items sequentially. These sequence numbers appear in "rolled-up" entries in the Procurement Annex to the Five Year Defense Program. The data in these entries are reflected in Exhibit P-1.

b. Budget Line Items (BLI's). The Budget Line Item (BLI) generally means an item in the President's Budget; however, additional items may be added after submission to Congress and after authorization/appropriation by Congress. Each BLI has a line number that becomes a part of the Budget Line Item Number (BLIN). In the BLIN, this 3-digit number is called the BLIN Serial Number.

c. Budget Line Item Number (BLIN). Upon completion of Exhibit P-1, the BLIN's are formally established by personnel in ODCSRDA's Procurement Programs and Budget Division entering the following information for each BLI to the Program and Funds Control System (PFCS) via a Control Data Corporation (CDC) terminal⁴ located in that office:

⁴Current plans are to transfer the PFCS to the Planning, Budgeting, and Accounting System (PBAS) in 1984. PBAS is to reside on the UNIVAC computer system at USAFAC.

The Budget Line Item Number (BLIN)
The Budget Line Item Nomenclature
Standard Study Number (SSN)
Unit of Measure (UM)
The Budget Program Number (Activity Structure Code as
listed in AR 37-100-XX, The
Army Management Structure)

(1) The BLIN is a six- or seven-position alphanumeric code which is established and used during execution to control procurement funds. BLIN's do not appear in the President's Budget. The BLIN is used to execute the BLI. Frequently, in common usage, the terms BLI and BLIN are used interchangeably; nonetheless, they pertain to specific elements and are not the same.

(2) The BLIN and the BLI are related directly through the common use of a 3-digit number. The last three digits of the BLIN are the same as the computer-generated line number of the BLI. If, for example, the BLI for the M1 Abrams Tank appears on a different line in Exhibit P-1 for FY XX than it did in FY XX-1, then it will have a different line number and, consequently, will have a different BLIN. This is one major reason why the BLIN for a system may not be constant from fiscal year to fiscal year.

(3) Additions and Deletions of BLIN's. It should be noted at this point that BLIN's may be added/or deleted at any time; however, cross references are maintained by ODCSRDA for trackability.

3-6. Execution. The Secretary of the Army is accountable for program execution and day-to-day management of Army resources. In response to initiatives introduced by the Reagan administration for better defense management, concern has centered on how well program and budget execution applies resources to achieve intended purposes. The Chief of Staff of the Army directed that an execution function be incorporated into the PPBS in order to encourage and accelerate needed procedures which has resulted in the PPBES.⁵ The execution function includes the apportioning and allocating of funds to carry out approved programs, obligating and disbursing these funds, and the associated reporting and review. Other long-standing procedures include activities during program and budget execution to finance unbudgeted requirements and to conduct selected resource management reviews.

a. Flow of Funds. After the President signs an appropriation act, the Treasury issues Appropriation Warrants to the Army. Concurrently, the Office of Management and Budget (OMB) apportions the funds and the Office of the Secretary of Defense (OSD) releases the programs. The Funds Control Officer at USAFAC assures that all elements balance; i.e., there is obligation authority with respect to given programs, and the cash is available for disbursement. Then, upon request of Appropriation Directors, the funds are allocated by USAFAC, and suballocated or allotted by Special Operating Agencies/General Operating Agencies (SOA/GOA) to installations in order to

⁵PPBES Handbook, 3d Ed., 1982, pps. 8-2,3

execute approved programs. Figure 3-4 shows the Flow of Funds.

b. Accounting Reports. As programs are executed, the data are reported to USAFAC. The flow of procurement data comes upward through the chain as presented in Figure 3-4, via the Input Working Subsystem (IWS) and is reported by BLIN. USAFAC conducts numerous analyses, reconciliations and reviews of all appropriation data before consolidating the data and preparing the accounting reports. One of the recipients of procurement data is ODCSRDA, and this effectively closes the circle on BLIN execution. There are two types of accounting reports (see Table 3-3). The perception of many individuals regarding the two types of reports is that the Managerial Reports contain data that are Cumulative From Inception (CFI) and that Status Reports contain data that pertain to the Current Fiscal Year (CFY); however, many of the reports contain both types of data.

3-7. Summary. The BLIN is a derived number. Its composition depends upon events and activities which precede it in the annual cycle of the Planning, Programming, Budgeting and Execution System. It most closely relates to the budgeting function and is greatly affected by the Budget Structure that is employed in the Procurement Annex to the Five Year Defense Program and Exhibit P-1 (Supporting Data for the President's Budget). The Budget Activity Structure serves to separate major materiel systems from their modifications, spares and repair parts, and support equipment and facilities. The procurement dollars for major materiel systems are fragmented, with multiple BLIN's in many cases, while some BLIN's cannot be broken out by system. Any attempts to restructure/redefine BLIN's must deal with the Budget Activity Structure.

FLOW OF FUNDS

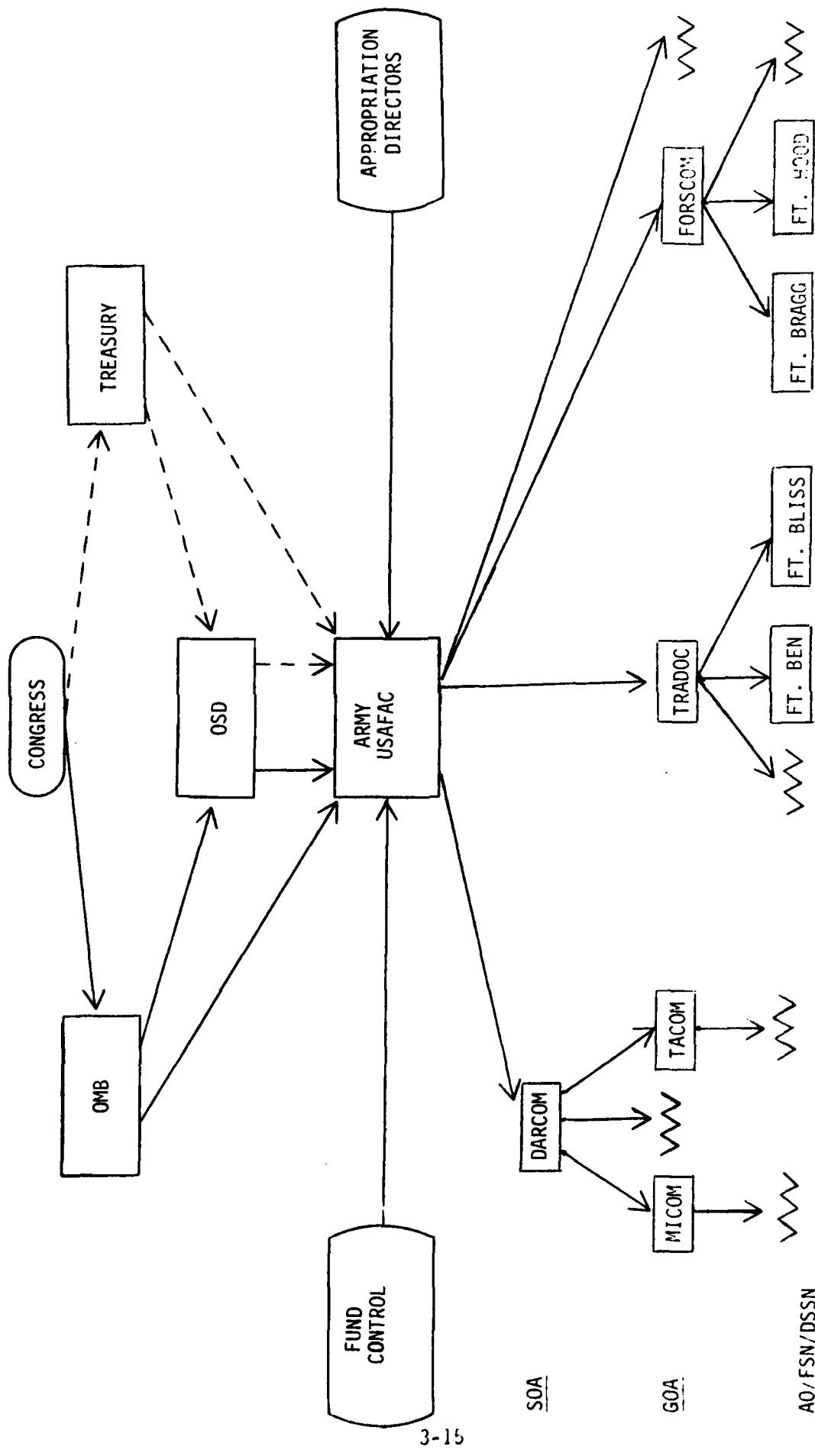


Figure 3-4

USAFAC
MAJOR PROCUREMENT ACCOUNTING REPORTS

MANAGERIAL REPORTS

Status of Programs and Funds, Direct
Status of Programs and Funds, Customer
FRA/Customer Order Control
Tweleve Month Obligation Plan, Direct
Twelve Month Obligation Plan, Customer
Execution Status Report
Status of Procurement Appropriations,
Customer Financial Plan

STATUS REPORTS

Flash Report on Obligation
Status
Flash Report on Outlays
Report on Budget Execution
Appropriation Status by
Fiscal Year Programs and
Subaccount
Report on Obligations
Status of Allocations

Table 3-3

CHAPTER 4

BLIN VIS-A-VIS SYSTEM CORRELATION

4-1. Approach. Following research on current rules, regulations, and practice in assigning, structuring and defining BLIN's, an attempt was made to correlate FY 83 BLIN's (Direct Program - procured for Army) with the "Total Army" on a system basis in order to test the initial hypothesis that a significant portion of a system's procurement costs could be obtained from BLIN's, given that the BLIN's associated with a materiel or non-materiel system could be identified.

a. BLIN List. A list of FY 83 BLIN's and their nomenclature was extracted from the APARS Budget Line Item Master Records as of 30 November 1982. The BLIN's in this list were by appropriation:

<u>APPROPRIATION</u>	<u>NUMBER OF BLIN'S LISTED</u>
Aircraft	30
Missiles	25
Weapons & Tracked Combat Vehicles	43
Ammunition	52
Other Procurement	229
National Guard	0
 TOTAL	379

A block of BLIN's in each appropriation pertained to accounts such as "Unreconciled Programs at GOA - 303797," "Undistributed Progress Payments - 303998," "Accrued Expenditures - 303792," etc. It was determined that BLIN's with BSN 700-999 were reserved for accounting purposes and a decision was made to exclude them from the correlation efforts. The revised list contained 346 BLIN's. (BLIN List is at Appendix B.)

b. System List. A list of Army materiel and non-materiel systems was taken from Tables 4-3 and 4-4 of a draft paper prepared in the Office of the Director of Cost Analysis titled, "A Mission Area Structure for the Management of Army Resources," DCA-P-XX, September 1981. This list was used because it is the only one known to exist that is "totally exhaustive and mutually exclusive" in capturing the total Army. The System List is at Appendix C and gives the systems by class. The following shows the number of systems in each materiel and non-materiel class:

<u>CLASS</u>	<u>NUMBER OF SYSTEMS</u>
<u>MATERIEL</u>	
Aircraft	8
Missiles	18
Electronics	29
Tracked Combat Vehicles	7

MATERIEL (Continued)

Cannon, Artillery, Mortars and Guns	8
Engineering and Related Systems	5
Ground Vehicles	11
Ammunition	1
Other	9
Subtotal	96

NON-MATERIEL

Health	7
Installation Management	5
Personnel and Related Services	5
Support Outside Army	3
Defense Research/Advanced Technical Development	2
Intelligence Activities	3
Army Headquarters	5
Training	4
Ground Combat/Combat Support	5
Transportation/Traffic Management	2
Engineer Services/Civil Works	3
Police and Security	2
Production Base Support	1
Central Supply and Maintenance	5
Subtotal	52
Grand Total	148

An attempt was made to crosswalk the BLIN's in the BLIN List to the systems in the System List.

4-2. Observations. During the effort to crosswalk the FY 83 BLIN's to the materiel and non-materiel systems, several observations were made:

a. There was a "conflict of rules" available to define a "system". For example, the BLIN's associated with ammunition comprise one class, Ammunition; however, one of these has the BLIN nomenclature, Projectile, 155MM HE Copperhead. Copperhead is a SAR system, but in this study it is grouped with the other ammunition BLIN's and is not treated as a separate system. Another example from the ammunition appropriation concerns the BLIN for the 25MM ammunition. This ammunition is included in the SAR for the Bradley Fighting Vehicle, but it is treated in this study as part of the ammunition system and class. In addition, the "rules" were inadequate with respect to defining non-materiel systems. For example, the Cargo Airplane C-12A is not a materiel system; thus, by definition, it is part of a non-materiel system, but the specific non-materiel system could not be identified.

b. Some of the systems cut across appropriation lines. For example, three BLIN's were found for the TOW Missile System. Two were found in

Appropriation #2032 - Missiles; the third was found in Appropriation #2033 - Weapons and Tracked Combat Vehicles:

BLIN 302008	TOW Missile
BLIN 302015	TOW Modifications
BLIN 303018	TOW Vehicle

c. Some of the BLIN's could not be broken out by system. Examples are Spares and Repair Parts; Items Under \$900,000, and Quick Return on Investment.

4-3. Correlation Statistics. This section attempts through the use of some statistical data to show the degree of correlation currently achievable with today's BLIN structure. The number of BLIN's associated with systems is given; however, the percentage of the total FY 83 procurement dollars (from Exhibit P-1) identified by these BLIN's provides a more significant test of the initial hypothesis that a significant portion of the total procurement costs of major Army systems are identifiable using today's BLIN's.

a. Correlation Tables are at Appendices D, E, and F:

Appendix D - Correlation Table One
(Materiel Systems)

Appendix E - Correlation Table Two
(Non-Materiel Systems)

Appendix F - BLIN's Not Associated
With Systems

b. There were 346 FY 83 BLIN's and 148 Systems:

123 BLIN's (35.5%) were identified with 52 Materiel Systems.

5 BLIN's (1.4%) were identified with 5 Non-Materiel Systems.

218 BLIN's (63.1%) were unidentified.

Although only 36.9% of the BLIN's were identified with systems, these BLIN's accounted for 69.2% of the procurement dollars.

c. In an extended effort to address the 218 unidentified BLIN's, subjective analysis was used in an attempt to place them in the "most likely" system classes. This list is at Appendix F on pages F-7 through F-11 immediately following the list of unidentified BLIN's.

d. It should be noted that the BLIN's identified with a system may not represent the total procurement costs of that system because of fragmentation (difficulty in system identification and costs distributed across appropriation lines) and frequent commingling of costs of a system with costs of other systems, such as in Spares and Repair Parts, Items under \$900,000, etc.

e. In order to present the correlation results pictorially, eight figures follow:

(1) Figure 4-1 shows the distribution of FY 83 BLIN's among the procurement appropriations. However, as previously noted, there were no FY 83 BLIN's for National Guard.

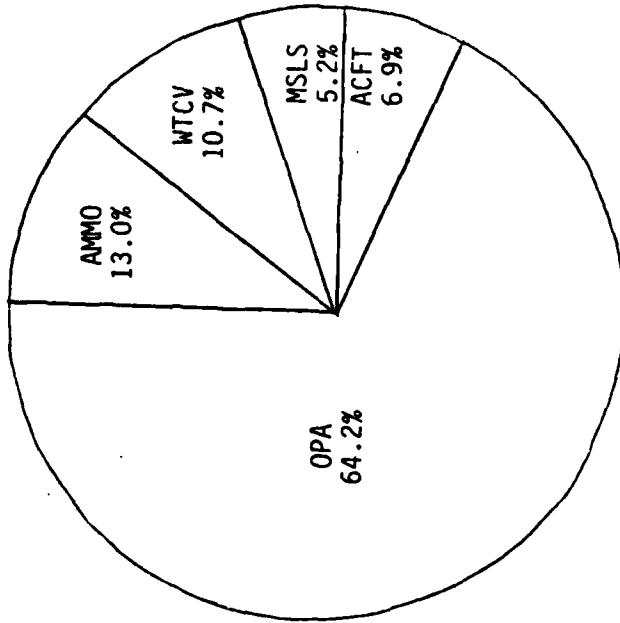
(2) Figure 4-2 shows the percentage of BLIN's identified and, for comparison, the percentage of the total FY 83 procurement dollars accounted for by those BLIN's.

(3) Figure 4-3 shows the impact of the ammunition BLIN's on the percentages. Of the 128 BLIN's identified, 38 were ammo (29.7%) which accounted for 17.5% of the identified BLIN dollar value. As expected, most of the procurement dollars identified were associated with systems other than ammunition. That is, approximately 30% of the identified BLIN's accounted for only about 18% of the system-identified dollars and about 12% of the total FY 83 procurement dollars.

(4) Figures 4-4 through 4-8 show the percentage of identified BLIN's in each appropriation and the distribution of those BLIN's among system classes. These figures highlight the fact that "other" system classes may be found in an appropriation. For example, the Aircraft Appropriation contained a missile BLIN and the Ammunition Appropriation contained an engineering and related system BLIN. Missile BLIN's actually were found in four different appropriations (Aircraft, Missiles, Weapons and Tracked Combat Vehicles, and Other Procurement).

4-4. Summary. Correlation efforts support the initial hypothesis that a significant portion of a system's procurement costs can be identified using BLIN's as currently defined and structured. Although today's BLIN's cannot identify procurement costs of the "Total Army" on a system basis because some system costs are commingled with costs of other systems, it is possible that costs in addition to those identified are available if a system could be defined more precisely. The system costs are fragmented within an appropriation and among appropriations, making it difficult to "pull the pieces together," and there is a "conflict of rules" between those for the system list used in this study and in the SAR requirements concerning the characteristics of a "system". This dichotomy creates a "system" for a specific purpose (e.g., Copperhead for a SAR), after which it reverts to a "non-system" status as an element of another system (Ammunition). However, even with the current BLIN structure and the problems of system identification, a significant part of the procurement appropriations can be "tracked" vis-a-vis Army materiel and non-materiel systems.

FY 83 BLIN'S*
VIS-A-VIS
PROCUREMENT APPROPRIATIONS



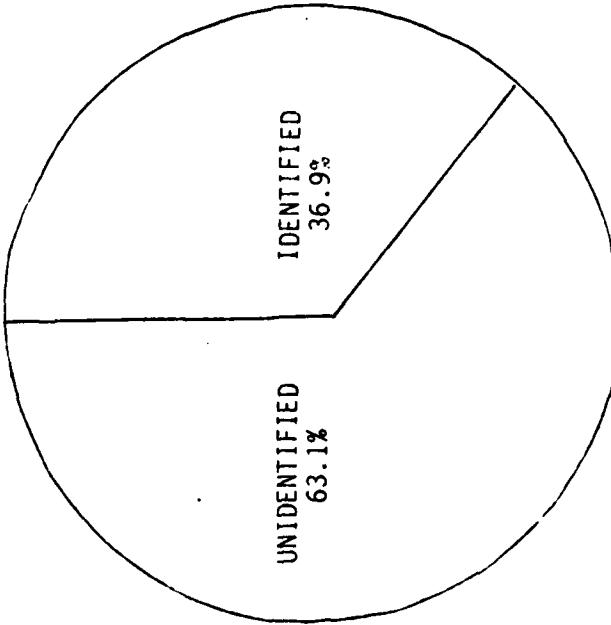
NUMBER OF BLINS	
ACFT	24
MSL S	18
WTCV	37
AMMO	45
OPA	222
ARNG	0
	346

*AS OF NOV 82 BLIN MASTER LISTING

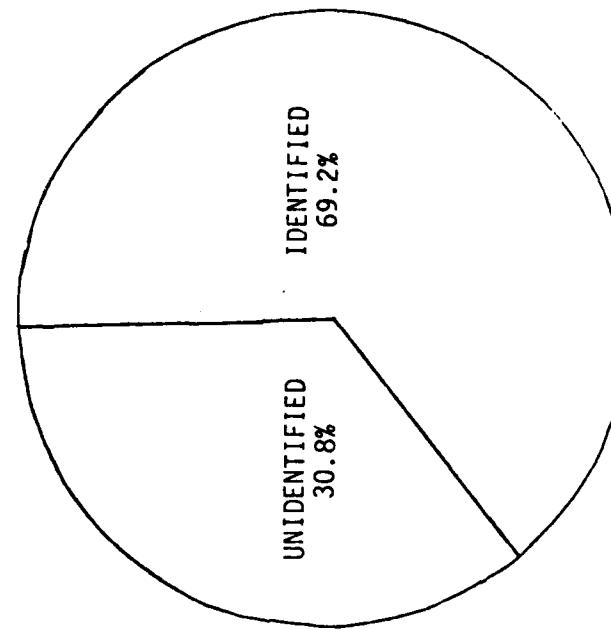
Figure 4-1

FY 83 BLIN'S* IDENTIFIED
WITH SYSTEMS

FY 83 NUMBER OF BLIN'S



DOLLAR VALUE OF BLIN'S



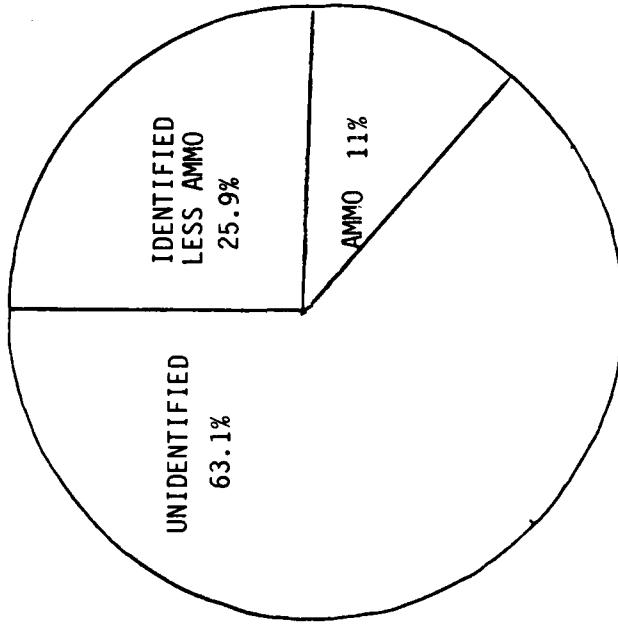
IDENTIFIED BLINS-MATERIEL	123
IDENTIFIED BLINS-NON-MATERIEL	5
UNIDENTIFIED BLINS	218
TOTAL	346

*AS OF NOV 82 BLIN MASTER LISTING

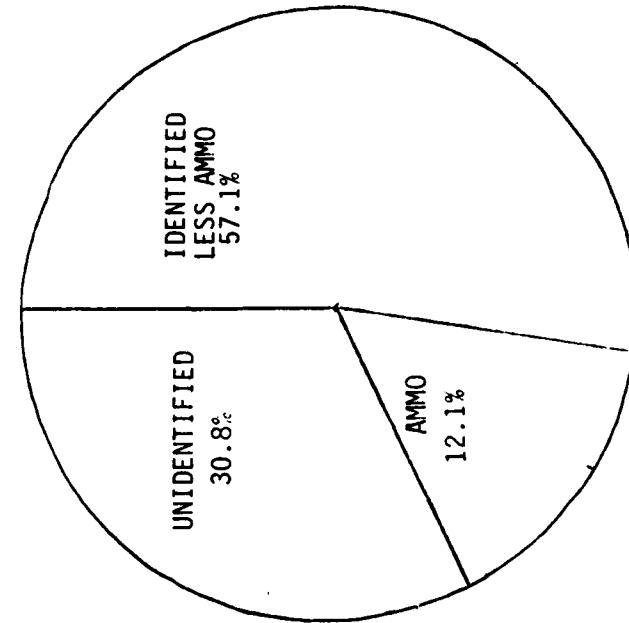
Figure 4-2

FY 83 BLIN'S* IDENTIFIED
WITH SYSTEMS
(IMPACT OF AMMUNITION SYSTEM)

FY 83 NUMBER OF BLIN'S



DOLLAR VALUE OF BLIN'S



IDENTIFIED BLINS--MATERIEL (LESS AMMO)	85
IDENTIFIED BLINS--MATERIEL (AMMO)	38
IDENTIFIED BLINS--NON-MATERIEL	5
UNIDENTIFIED BLINS	218
TOTAL	346

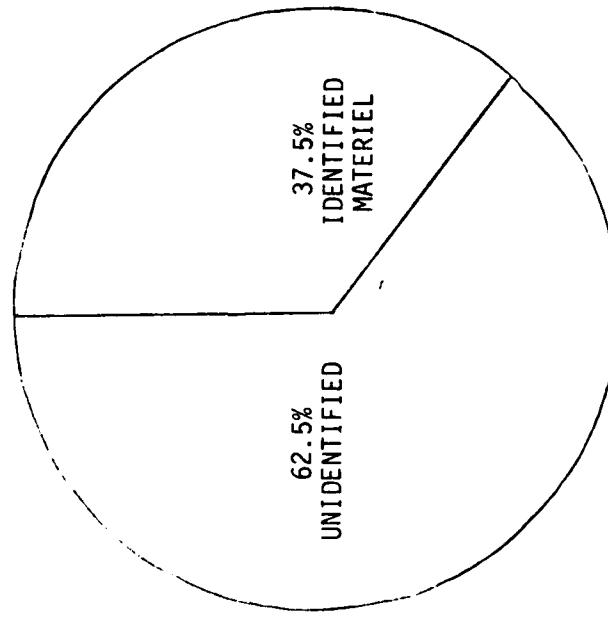
*AS OF NOV 82 BLIN MASTER LISTING

Figure 4-3

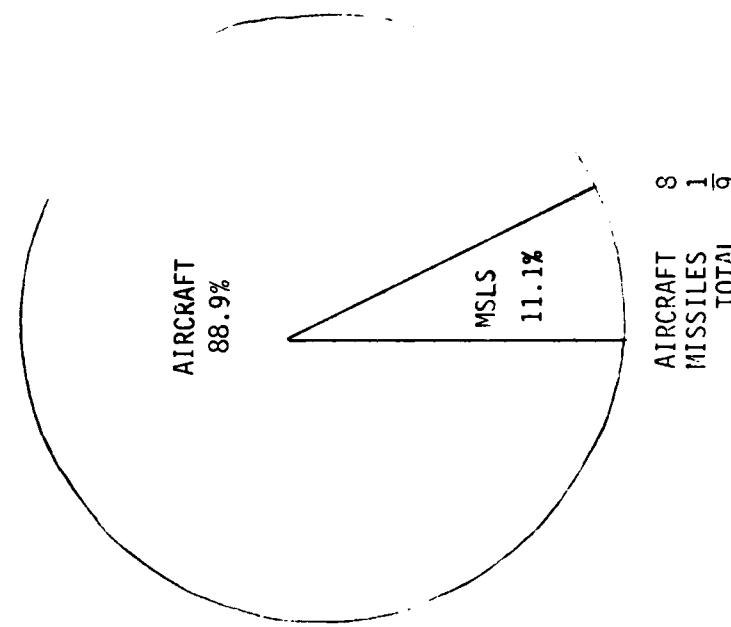
AIRCRAFT APPROPRIATION

FY 83 BLINS IN AIRCRAFT APPROPRIATION

IDENTIFIED AIRCRAFT APPROPRIATION BLINS
BY SYSTEM CLASS



Category	Count	Percentage
IDENTIFIED BLINS-MATERIEL	9	
UNIDENTIFIED	15	
TOTAL	24	

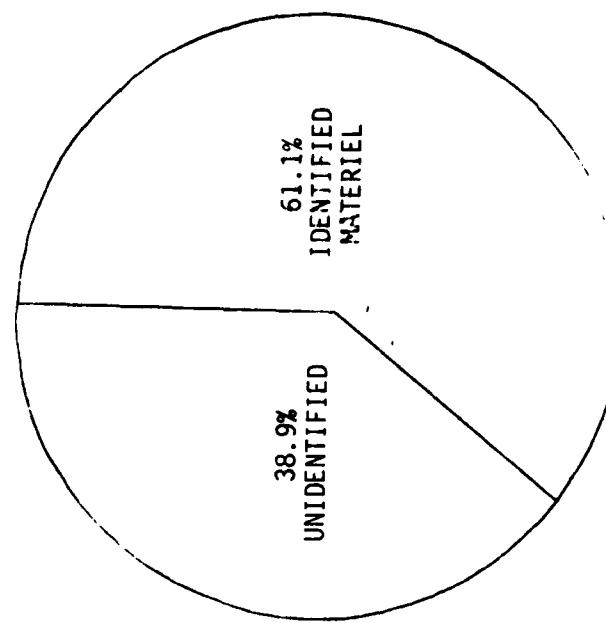


Category	Count	Percentage
AIRCRAFT	8	
MISSILES	1	
TOTAL	9	

Figure 4-4

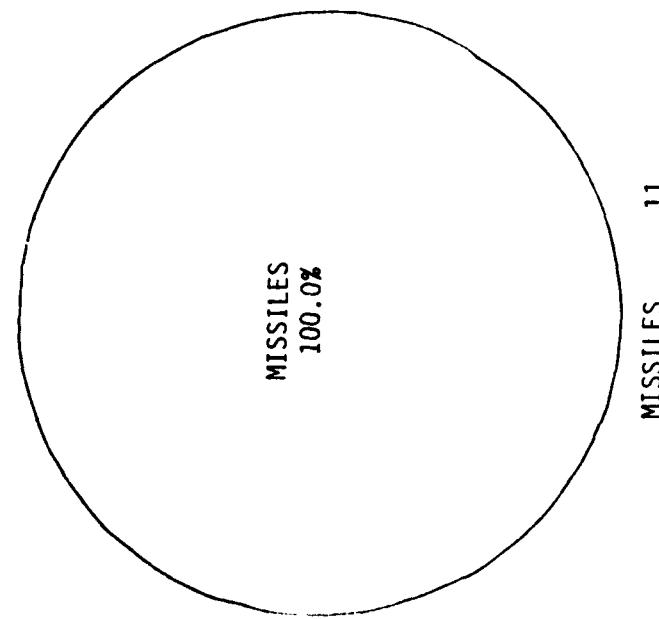
MISSILE APPROPRIATION

FY 83 BLINS IN MISSILE APPROPRIATION



IDENTIFIED BLINS-MATERIEL	11
UNIDENTIFIED	7
TOTAL	18

IDENTIFIED MISSILE APPROPRIATION BLINS
BY SYSTEM CLASS

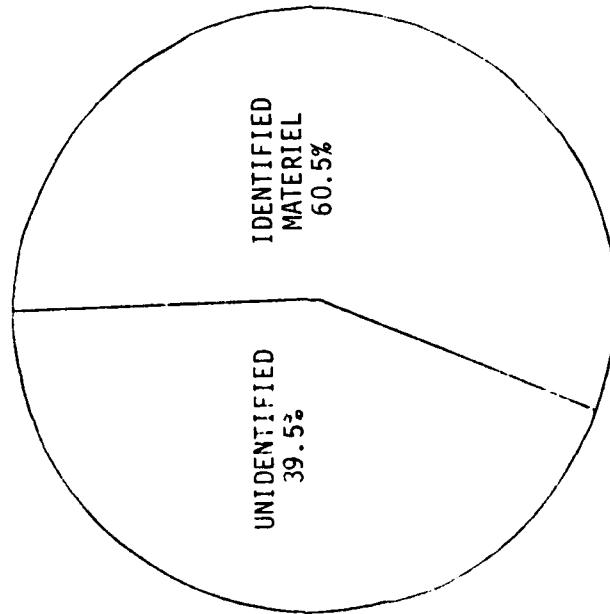


MISSILES 11

Figure 4-5

WEAPONS AND TRACKED COMBAT VEHICLES APPROPRIATION

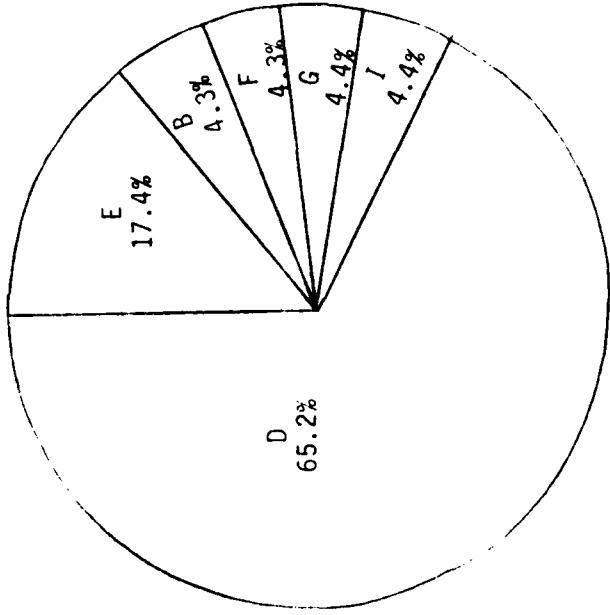
FY 83 BLINS IN WEAPONS AND TRACKED COMBAT VEHICLE (WTCV) APPROPRIATION



IDENTIFIED BLINS-MATERIEL
UNIDENTIFIED
TOTAL

23	15	38
----	----	----

IDENTIFIED WTCV APPROPRIATION BLINS
BY SYSTEM CLASS

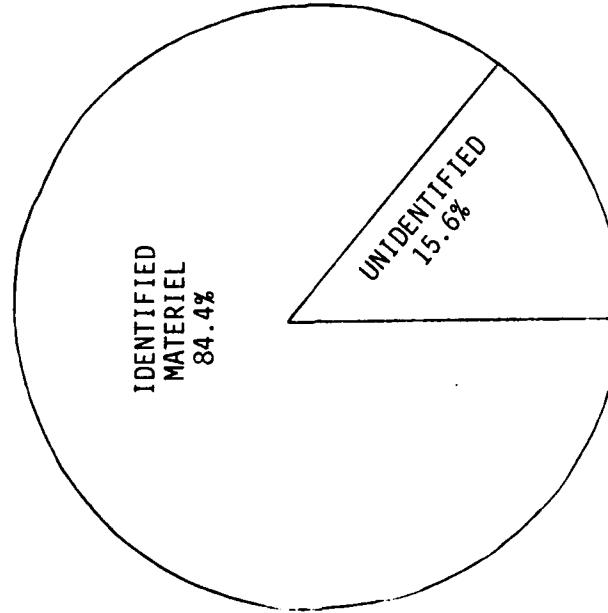


B - MISSILES	1
D - TRACKED COMBAT VEHICLES	15
E - CANNON, ARTILLERY, MORTARS & GUNS	4
F - ENGR & RELATED	1
G - GROUND VEHICLES	1
I - OTHER	1
TOTAL	23

Figure 4-6

AMMUNITION APPROPRIATION

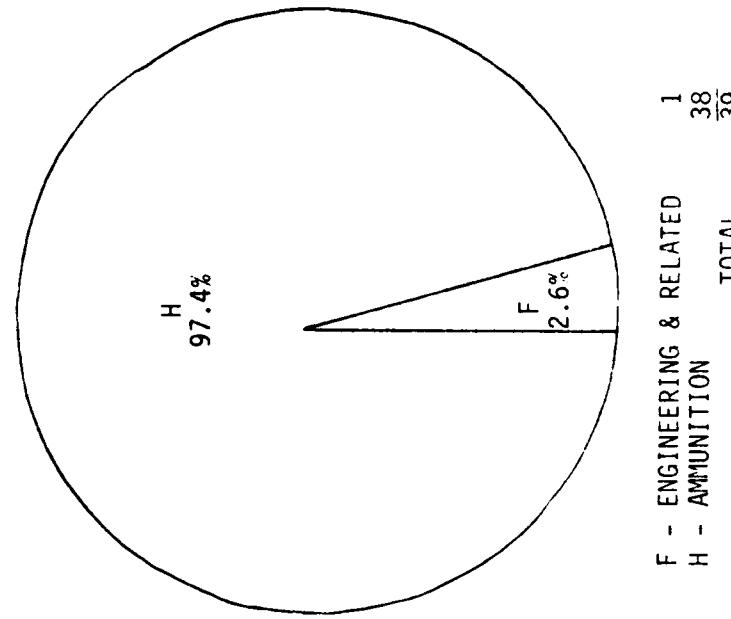
FY 83 BLINS IN AMMUNITION APPROPRIATION



Category	Value
IDENTIFIED BLINS-MATERIEL	39
UNIDENTIFIED*	6
TOTAL	45

*AMMO BY DEFINITION IS A MATERIEL SYSTEM; HOWEVER, SEVEN AMMO BLIN'S WERE QUESTIONABLE. ONE APPEARS TO BE ENGINEERING RELATED. THE OTHERS MAY COMBINE COSTS OF AMMO WITH OTHER SYSTEMS.

IDENTIFIED AMMUNITION APPROPRIATION BLINS BY SYSTEM CLASS

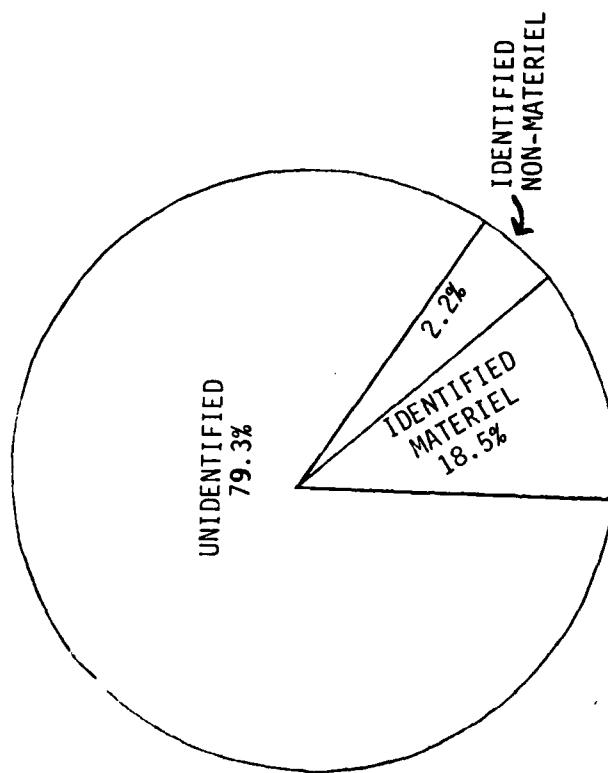


Category	Value
F - ENGINEERING & RELATED	1
H - AMMUNITION	38
TOTAL	39

Figure 4-7

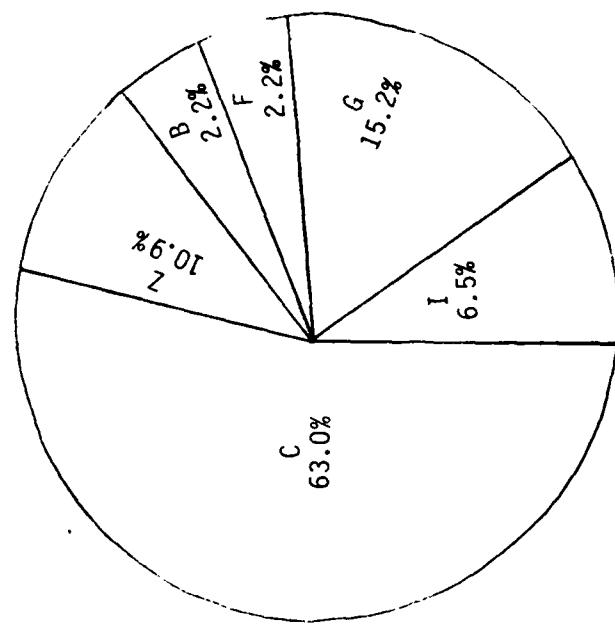
OTHER PROCUREMENT APPROPRIATION

FY 83 BLINS IN OTHER
PROCUREMENT APPROPRIATION



Category	Value	Percentage
IDENTIFIED BLINS-MATERIEL	41	18.5%
IDENTIFIED BLINS - NON-MATERIEL	5	2.2%
UNIDENTIFIED	176	78.5%
TOTAL	222	100%

IDENTIFIED OTHER PROCUREMENT APPROPRIATION
BLINS BY SYSTEM CLASS



Category	Value	Percentage
B - MISSILES	1	1%
C - ELECTRONICS	29	29%
F - ENGR & RELATED	1	1%
G - GROUND VEHICLES	7	7%
I - OTHER	3	3%
Z - NON-MATERIEL	5	5%
HEALTH CARE	1	1%
INSTAL MGT	1	1%
PERS &	1	1%
RELATED SVCS	2	2%
SPT OUTSIDE	2	2%
ARMY		
TOTAL	46	100%

Figure 4-8

CHAPTER 5

ALTERNATIVE BLIN ARCHITECTURES

5-1. Feasibility of Architectural Change. The purpose of the study was to determine the ability of the current Budget Line Item Numbers (BLIN's) to identify procurement costs of major Army materiel and non-materiel systems, with a view to determining the feasibility of restructuring/redefining BLIN's to assist in collecting/tracking those costs.

a. Results of the correlation efforts showed that system costs are fragmented and that some system costs are commingled. This supports the initial hypothesis that BLIN's, as currently defined, do not identify the total procurement costs of major Army systems, although they can identify a significant portion of those costs.

b. Since BLIN's are determined by the order in which Budget Line Items are listed in Exhibit P-1, and since Budget Line Items are placed in Exhibit P-1 by Budget Activity/Subactivity, efforts to restructure/redefine BLIN's necessarily must deal with the Budget Structure. Efforts to change the Budget Structure would involve coordination with Office, Secretary of Defense. However, since there is some flexibility already provided among procurement appropriations for the Army, as well as among Services, it may be possible for the Army to obtain permission to make a unilateral change in the Budget Structure.

c. There is a need to "track" system costs past the five-year "life cycle" of BLIN's. At the end of the fifth year, any funds not disbursed are placed in "M" accounts by appropriation. Funds in the "M" accounts are disbursed but cannot be charged against BLIN's. If adjustments are made, they cannot be associated with a BLIN. Consequently, the total actual (historical) procurements costs of a materiel or non-materiel system are not identifiable through the use of BLIN's. A solution to tracking system procurement costs past the current five-year constraint would be to extend the "life" of a BLIN until all adjustments and disbursements have been made. This solution is not feasible. Each fiscal year, new BLIN's are created and entered into the accounting system where BLIN's from the preceding four years also reside. If BLIN's had indefinite life cycles, the number of BLIN's in the accounting system could become unmanageable. A special case which might make this solution feasible would be to limit the "indefinite life" BLIN's to the major Army materiel and non-materiel systems. The more practical approach would be to continue the use of "M" accounts, but provide a way to access information by system from these accounts. The redesign of the Standard Finance System (STANFINS-R) may provide this information. At the present time, however, it is not likely that the transactions in the "M" accounts could be identified by system.

5-2. Approaches. Three approaches to obtaining systems' procurement costs follow. The first does not involve restructure; rather, it is a procedure that employs data that are readily available within the current PPBES to obtain an approximation of a major materiel system's total procurement costs. The second approach would involve restructure; it adds a Budget

Activity which would be dedicated to major materiel systems. Only the last approach addresses both materiel and non-materiel systems and involves a continuing effort to insure that the Army Management Structure (Redesign) (AMS(R)) maintains the matrix concept in its architecture, the components remain managerially relevant, and the System Component be totally exhaustive while its subcomponents are mutually exclusive.

a. Approach #1.

(1) The concept of this approach is that by using system-unique BLIN's in conjunction with other PPBES data, a high percentage of major materiel systems' procurement actual costs/obligations could be tracked/derived. Annually, five steps would have to be accomplished. The first step would be to identify all current fiscal year BLIN's totally attributable to each major materiel system. Next, the approved program amount associated with the identified BLIN's would be obtained from APARS and summed for each system. The total approved program amount for each set of major materiel system BLIN's would then be compared with the current fiscal year procurement estimate in the latest Baseline Cost Estimate (BCE) for that system. The next step would be the identification/explanation of any difference between the systems' BLIN's approved program and the BCE's by using data in the Procurement Annex to the Five Year Defense Program and other data sources. The last step is the actual tracking/derivation of the system's procurement actual costs/obligations.

(2) A test of the above approach was conducted using three SAR (Selected Acquisition Report) systems - the UH60 (BLACKHAWK) aircraft, the PATRIOT missile system, and the M1 (ABRAMS) tank. The criteria used in selecting these major materiel systems were that they had a significant FY 83 procurement program, a recent BCE available, and represented three different materiel system classes. The BLIN's and associated current approved program for these systems already had been established in the Selected BLIN and Contractor Reports, DCA-R-94(R), dated 4 February 1983. The BCE data used in this test were obtained from the following:

BASELINE COST ESTIMATES

BLACKHAWK	Investment Funding Profile, BCE, March 1983
PATRIOT	Program Manager's BCE, January 1982
ABRAMS	Program Manager's BCE, April 1982

(3) The FY 83 current dollars expressed in the BCE's for PATRIOT and M1 ABRAMS Tank had been calculated with inflation indices promulgated by OSD and published in 1982. The FY 83 current dollars in the BLACKHAWK BCE had been calculated with updated indices published in early 1983. To provide consistency among systems, the BLACKHAWK data were deflated to constant dollars and then re-inflated with the index for FY 83, as published in 1982. The decision to change the BLACKHAWK data rather than the PATRIOT and M1 data was made in order to avoid bias. That is, the difference would have been

smaller because the index published in 1983 showed a lower rate of inflation.

(4) The next step in the test was to determine how much of each system's FY 83 procurement estimate in the BCE could be identified from the BLIN's and the Procurement Annex to the FYDP. The dollar value used for each BLIN was obtained from the Current Approved Program line in the latest published Selected BLIN Reports.⁶ The FY 83 Initial Spares values were taken from the Procurement Annex to the FYDP, FY 83-87. This document was used because the initial spares are available by system; they are not available by system in Exhibit P-1 and, consequently, there are no BLIN's that give initial spares by system. In order to determine the authenticity of the dollar amounts in the Procurement Annex, the total costs of spares and repair parts (both initial and replenishment) in each document were compared. The amounts were identical. Therefore, the costs given for initial spares in the Procurement Annex were used with a high degree of confidence in identifying a portion of the difference between the BCE and the BLIN identified values. Figure 5-1, 5-2 and 5-3 graphically show the results in terms of the percentage of the BCE that the BLIN's and initial spares identified/explained.

(5) This approach could be implemented unilaterally because all the data sources needed are available, and it would not impact on any of the current procedures in the PPBES. The approach could satisfy to a great extent the need for procurement cost data; however, it would not provide total procurement dollars and would not address the problems inherent in the current Budget Structure and in the "M" accounting procedures which effectively obstruct efforts to collect actual (historical) procurement costs by system, both materiel and non-materiel.

b. Approach #2.

(1) This approach would add to each procurement appropriation except Ammunition a new Budget Activity - Major Materiel Systems - which would be dedicated to major materiel systems. For example, Appropriation #2031 - Aircraft, would be restructured as follows:

Budget Activity #1 - Aircraft
Budget Activity #2 - Modifications of Aircraft
Budget Activity #3 - Spares and Repair Parts
Budget Activity #4 - Support Equipment and Facilities

NEW → Budget Activity #5 - Major Materiel Systems, Aircraft
AH-1S
AAH-64
OH-58C
UH-60A
CH-47D
AHIP

⁶Selected BLIN Reports, dated Mar 83, prepared by Budget Execution and Reporting Division, USAFAC, and containing data as of 28 Feb 83.

PROCUREMENT
FY 83 BLACKHAWK PROGRAM

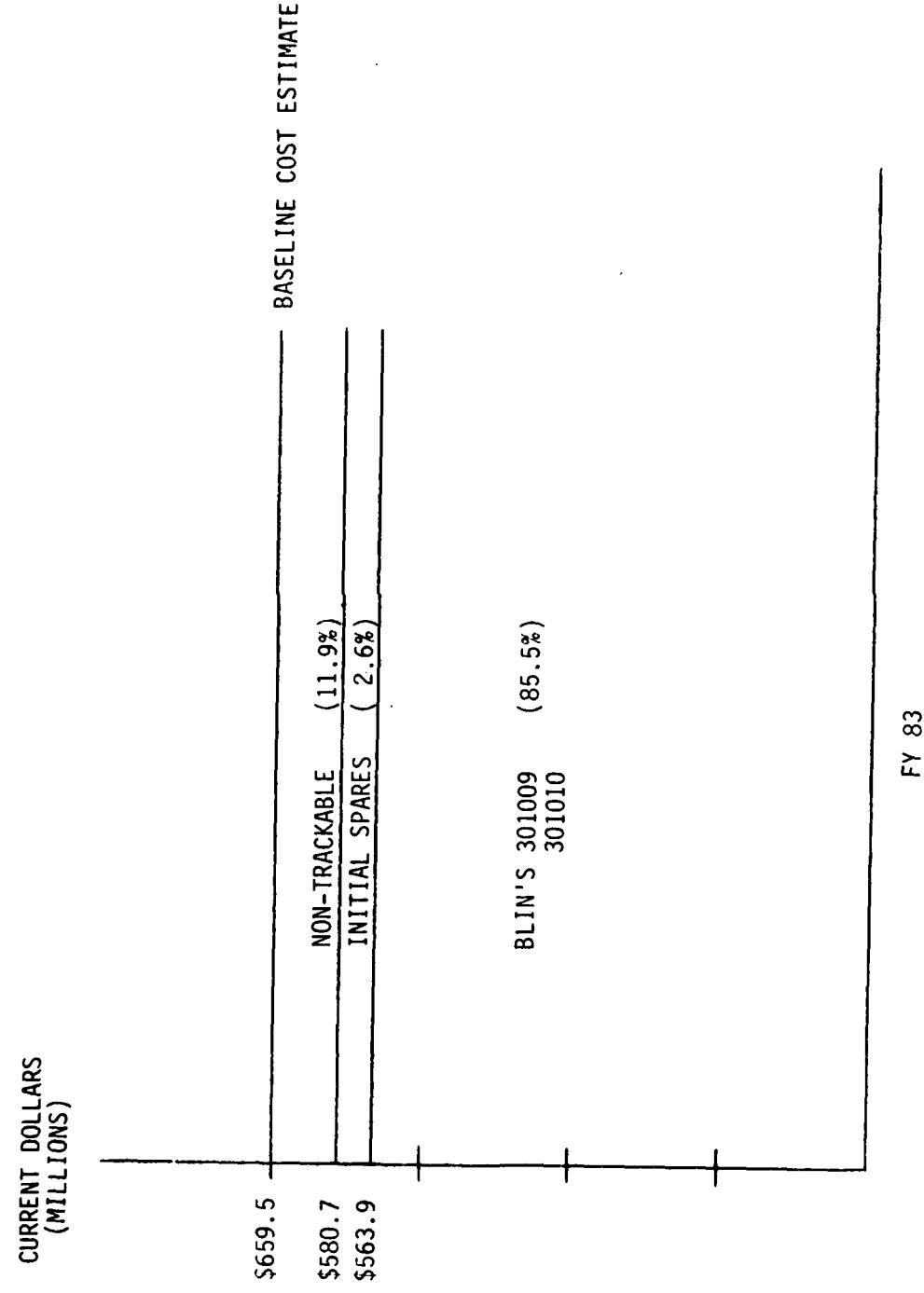
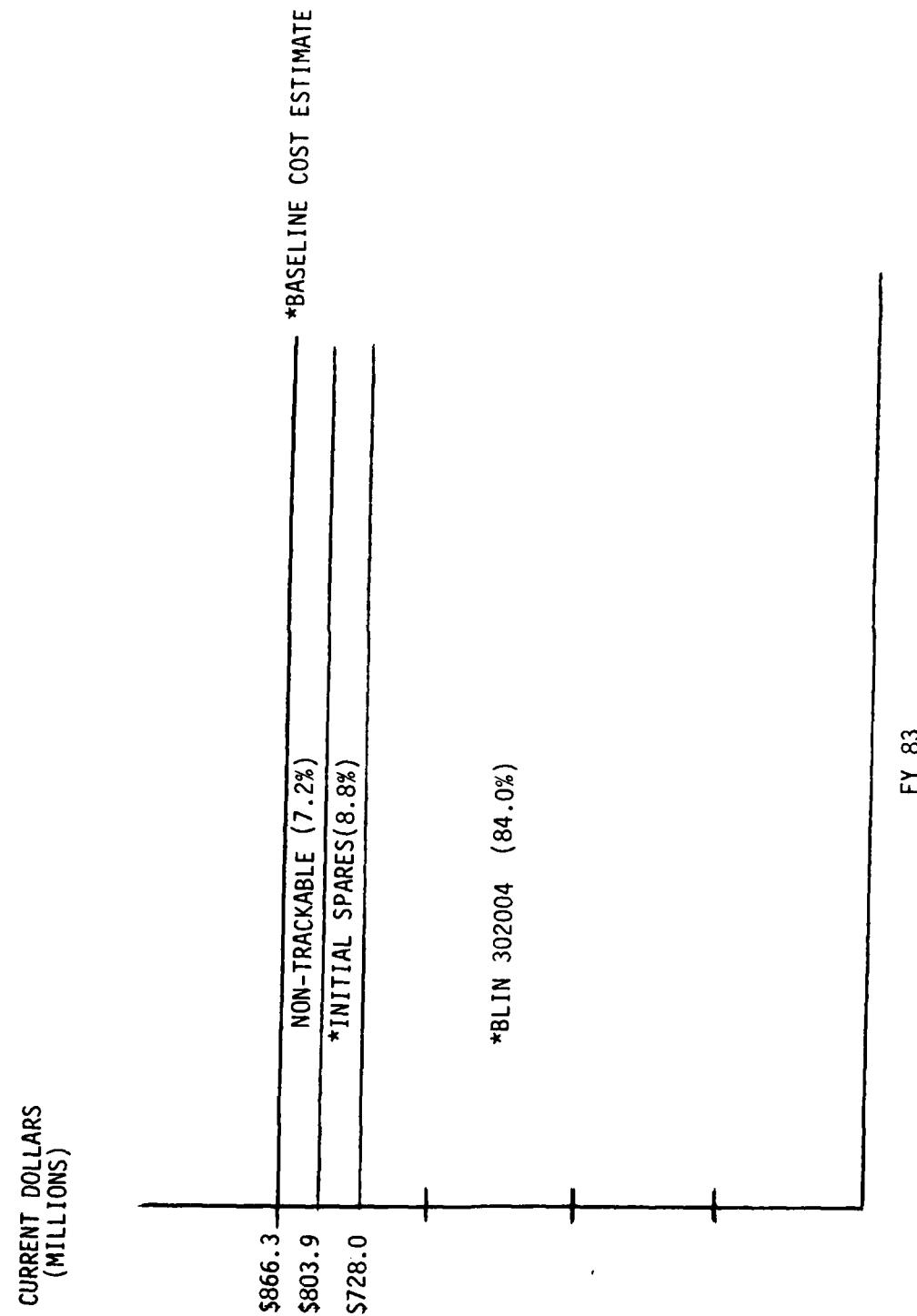


Figure 5-1

PROCUREMENT
FY 83 PATRIOT PROGRAM



FY 83

*The Jan 83 reduction in the quantity of fire units is not reflected in this data.

Figure 5-2

PROCUREMENT
FY 83 M-1 ABRAMS TANK PROGRAM

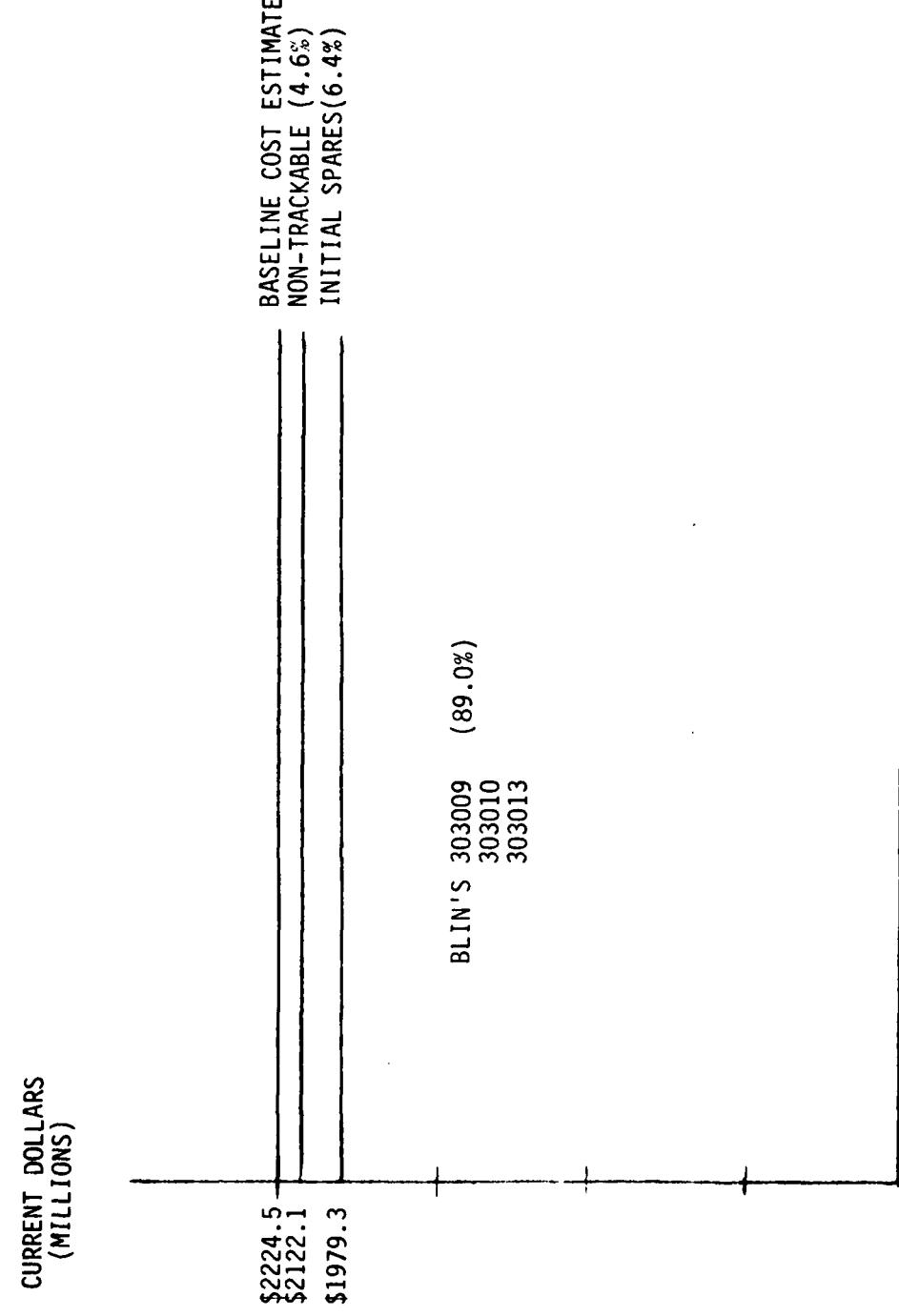


Figure 5-3

The FY 85 BLIN for the CH-47D, for example, would include the total FY 85 procurement dollars for the CH-47D including modifications, spares and repair parts, support equipment and facilities if any, as well as procurement of the new aircraft.

(2) The basic rationale for this approach is that any major materiel system should be important enough to justify a separate line in the P-1 and require identification of all procurement costs associated with the system. This parallels the current concept of the ASARC/DSARC process, SAR reporting, and Functional (System) PDIP's.

(3) This approach would provide the total procurement cost of a major materiel system and satisfy to a significant degree the requirement for cost feedback.⁷ The new Budget Activity could be implemented gradually. It could, for example, start with those major materiel systems that have Functional (System) PDIP's.

(4) Although implementation could be achieved gradually, the introduction of even one major materiel system BLIN would impact on the following resource management systems:

(a) SSN and OSD Sequence Numbering Systems. Numbers could change, or be added, although the general rules might not change. That is, the SSN's Roll Code (first four positions) could change as the entries "roll" to a higher level as they are aggregated to form a major materiel system BLIN. New OSD Sequence Numbers will have to be assigned to place the items under the new Budget Activity and in the desired order.

(b) Program Budget Decisions (PBD's). Currently a PBD may concern only one aspect of procurement such as spares and repair parts, or modifications. For items under the new Budget Activities, a PBD would be restricted to the whole major materiel system, or to the total Budget Activity, because the individual parts of a Budget Line Item would be transparent.

(c) Army Management Structure Code. The procurement portion of AR 37-100-XX would require revision to add the new Budget Activities.

(d) Procurement Requisition Order Numbers (PRON's). Since PRON's contain part of the BLIN, PRON's for Training Devices for M1 Series Tanks could not be distinguished from PRON's for M1 Abrams Tanks. There could be a significant increase in the number of PRON's having the same BLIN identification. However, the total number of PRON's in the Army should not be increased and may even be reduced under this approach.

(e) Selected Acquisition Report (SAR). Under the new Budget Activities concept, there is a possibility of a disconnect if a literal

⁷Reference DACS-DPZ-A Memorandum, dated 29 Apr 83, subject: Integration of Weapons Systems Costing, Programming, and Execution Management Systems, which is just the latest of many requirements for cost feedback.

interpretation of DODI 5000.33 is used viz. "P-1 line plus initial spares". The P-1 line under this approach would contain in addition to the major hardware the initial spares, modifications, support equipment, and facilities that are procurement funded.

(5) Extensive effort and coordination would be required to implement this approach in that approval must be obtained from Office of the Secretary of Defense, Office of Management and Budget, and Congress; and, assuming approval, terms must be defined, etc., in order to prepare for a smooth transition to the new structure.

(6) The initial hypothesis that architectural change could be achieved with minimal turbulence might not hold under this approach. In a complex system such as the PPBES, there always is the possibility that a significant change could bring the whole framework tumbling down. However, the PPBES is not static; it is dynamic. There have been changes to the PPBES over the years; two of those changes are reported in this study. It is not likely that those changes or the changes proposed in this approach would be critical to its continued operation as the Army's primary resource management system. Instead, it is with the greatest expectation that the benefits would outweigh the discomforts of temporary turbulence that this approach is proposed.

c. Approach #3. Initially this approach was to be a natural extension of Approach #2 wherein each procurement appropriation would consist only of materiel and non-materiel system-unique BLIN's. This paralleled the concept of the Army Management Structure (Redesign) (AMS(R)) System Component assuming that it would be totally exhaustive and mutually exclusive. However, upon closer examination, it became clear that this approach was just another "stovepipe" though by system rather than by Budget Activity. This observation led to the conclusion that what really is needed is a common management architecture and language that will allow for "matrix accounting," i.e., a systematic method of recording and summarizing financial transactions simultaneously in both "vertical" and "horizontal" managerially relevant constructs. Since "the basic architecture of the AMS(R) has been designed to provide a common management language for interrelating planning, programming, budgeting and accounting for all Army resources,"⁸ Approach #3 becomes the continuing effort to insure that the AMS(R) maintains the matrix concept in its architecture, the components remain managerially relevant, and the System Component is totally exhaustive while its subcomponents are mutually exclusive.

⁸Draft Army Management Structure (R) Directory, dated 11 Dec 81.

CHAPTER 6

SUMMARY

6-1. The Study. This study was conducted as part of a continuing effort to obtain actual (historical) systems' life cycle costs from the Army's finance and accounting data. The objectives of the study were:

Develop insights and information on the assignment and structure of BLIN's and their interface with related resource management systems. Produce appropriate flow diagrams.

Develop a correlation table to relate BLIN's to the total Army, with emphasis on Selected Acquisition Report (SAR) systems.

Develop an architecture which could be used to restructure BLIN's

a. The publications that were researched provided technical details on the assignment and structure of BLIN's and the information systems employed to control procurement funds by BLIN's; however, personal contact with operations personnel provided a "walk through" of the process that brought a broader understanding and a greater awareness of the tasks involved in the formulation and execution of the BLIN, and the opportunity to identify and investigate the related resource management systems.

b. The basic assumption which prompted initiation of the study was that BLIN's, as currently defined, do not identify the total procurement costs of major Army materiel and non-materiel systems although they do identify a significant portion of those costs. Research supports this assumption. A system can be represented by multiple BLIN's within one appropriation. In some cases, one or more of a system's BLIN's appear in other appropriations. Even if the BLIN's associated with a system can be identified, they do not represent the total procurement costs of the system; a portion of those costs will be in line items that cannot be broken out by materiel or non-materiel system such as spares and repair parts, items under \$900,000, etc.

c. The primary cause of systems' procurement funding fragmentation is the Budget Activity/Subactivity Structure. The Budget Line Items are distributed among Budget Activities/Subactivities in the major program and budget documents. The Budget Structure separates a materiel or non-materiel system from its modifications, spares and repair parts, and support equipment and facilities. Consequently, since the BLIN coding scheme derives from the location of the Budget Line Items in Exhibit P-1 (Supporting Data for the President's Budget), the BLIN's reflect the same funds fragmentation. Other resource management systems such as the Standard Study Number (SSN), OSD Sequence Number, and even the Budget Program Number which is the Activity Code in the Army Management Structure (AMS) support division by Budget Activity/Subactivity. Decisions are made which are based on Budget Activity/Subactivity such as Program Budget Decisions (PBD's). Obviously, any effort to restructure/redefine BLIN's must deal with Budget Structure.

Changes in Budget Structure involve coordination with Department of Defense.

d. BLIN's can be "tracked" for only five years. At the end of the fifth year BLIN's are retired. Any funds not disbursed are placed in "M" accounts by appropriation. After the balances are merged, funds may be disbursed to satisfy Government liabilities; however, the transactions cannot be associated with a BLIN. Consequently, "life cycle" procurement costs of a materiel or non-materiel system are not trackable using BLIN's even though the system is well-defined.

e. As a consequence of system funds fragmentation, it became necessary to locate a set of "rules" which could be used to define a "system". The criteria for such a set of rules required that the list of materiel and non-materiel systems identified be totally exhaustive and mutually exclusive for the total Army.

f. Correlation Tables were developed by attempting to crosswalk the FY 83 BLIN's in the Direct Program (procured for Army) to a list of materiel and non-materiel systems taken from tables in a draft paper prepared in the Office of the Director of Cost Analysis titled, "A Mission Area Structure for the Management of Army Resources," DCA-P-XX, September 1981. A summary of the statistics follows:

123 BLIN's	(35.5%)	were identified with 52 Materiel Systems.
5 BLIN's	(1.4%)	were identified with 5 Non-Materiel Systems.
218 BLIN's	(63.1%)	were unidentified.
346 BLIN's	(100.0%)	

Although only 36.9% of the BLIN's were identified with systems, those BLIN's accounted for 69.2% of the total procurement dollars for FY 83 in Exhibit P-1 (Supporting Data for the President's Budget).

Of the 128 BLIN's identified, 38 related to one system, Ammunition. However, these BLIN's which represented approximately 30% of the BLIN's identified with systems accounted for only about 18% of the dollars identified, and about 12% of the total FY 83 procurement dollars.

BLIN's were found for all SAR systems; however, the BLIN's did not identify the total procurement costs of the SAR systems.

g. Three approaches were developed to examine ways to improve historical data collection. The first approach involves a procedure which uses the current BLIN, augmented by data in other PPBES documents, to obtain an approximation of major materiel systems' total procurement costs. The second approach addresses a change in Budget Structure; and the third involves the Army Management Structure (Redesign) efforts.

(1) Approach #1. This procedure evolved from an effort to use the current BLIN's, augmented by information available in other PPBES documents, to obtain an approximation of major materiel systems' procurement costs. It

can be implemented unilaterally because it does not require BLIN restructure. The data sources are BLIN's in the Current Approved Program, Baseline Cost Estimates, and the Procurement Annex to the Five Year Defense Program. This procedure was tested on three SAR systems. A summary of the results are shown below:

<u>SYSTEM</u>	<u>PERCENT OF BASELINE COST ESTIMATE IDENTIFIED</u>
BLACKHAWK Aircraft	88.1
PATRIOT Missile System	92.8
M1 ABRAMS Tank	95.4

The results of the test indicate that a large portion of major materiel systems' procurement costs could be determined with this procedure; and, as noted previously, it could be accomplished without the need to restructure/redefine the BLIN. It would not impact on any of the current procedures in the PPBES. This approach could be exercised in the short run since all of the data sources are at hand. It could satisfy to a large extent the need for procurement cost data; however, it would not provide the total procurement dollars for a major materiel system, and it would not address the problems inherent in the current Budget Structure and in "M" accounting procedures which effectively obstruct efforts to collect actual (historical) cost data by system, materiel or non-materiel.

(2) Approach #2. This approach would add a new Budget Activity - "Major Materiel Systems" - to each of the appropriations except Ammunition. For example, the Aircraft Appropriation would be restructured as follows:

APPROPRIATION 2031, AIRCRAFT

Budget Activity #1 - Aircraft
Budget Activity #2 - Modifications of Aircraft
Budget Activity #3 - Spares and Repair Parts
Budget Activity #4 - Support Equipment and Facilities
NEW → Budget Activity #5 - Major Materiel Systems, Aircraft
AH-1S
AAH-64
OH-58C
UH-60A
CH-47D
AHIP

This approach would meet the need for total procurement costs of major materiel systems. It could be implemented gradually by starting with the Functional (System) Program Development Increment Packages (PDIP's). There would be some impact on numbering systems such as Standard Study Numbers (SSN), OSD Sequence Numbers, and Budget Program Numbers; and on decision documents such as the Program Budget Decisions (PBD's). Changes to the Budget Structure would require OSD approval and a considerable amount of coordination with all involved agencies in the effort to construct the major materiel system Budget Line Item Numbers.

(3) Approach #3. Initially this approach was to be a natural

extension of Approach #2 to include all materiel and non-materiel systems, but the result proved to be just another "stovepipe" when what really is needed is a common architecture and language. Therefore, Approach #3 became the continuing effort to insure that the Army Management Structure (Redesign) (AMS-(R)) maintains the matrix concept, components remain managerially relevant, and the System Components be totally exhaustive while subcomponents are mutually exclusive.

6-2. Concluding Thoughts. The Budget Line Item is widely known; the Budget Line Item Number is not so well-known. Actually, it is not even mentioned in the Planning, Programming, Budgeting, and Execution System Handbook. During research efforts, some persons at DA level responded to questions about the BLIN by asking, "What is a BLIN?" Others said, "That's a number the accountants use at USAFAC." This type of response leads to a consideration of BLIN function. What is it supposed to do, and does it do it? It appears that BLIN's should:

1. CONTROL PROCUREMENT FUNDS
2. TELL HOW WELL PROGRAM AND BUDGET EXECUTION APPLIES RESOURCES TO ACHIEVE INTENDED PURPOSES.

The first function is prescribed in the Army Procurement Appropriation Management Accounting and Reporting System (APARS) regulation, and it appears that BLIN's perform this function quite well. Extensive reconciliations and reviews are conducted at USAFAC before the data are consolidated and the accounting reports are distributed. The second function was taken from the introduction of the new PPBES Handbook where it is presented as the reason for adding Execution as a separate phase. Performance of the second function is questionable. If BLIN's are expected to be used for providing feedback on total procurement costs of materiel and non-materiel systems, then they currently fail Function #2.

APPENDIX A
LIST OF REFERENCES

OMB CIRCULARS

A-11	Preparation and Submission of Budget Estimates, June 1980
A-34	Instruction on Budget Execution, July 1976 (as amended)
A-109	Major System Acquisition, 5 April 1976 (as amended)

ARMY REGULATIONS

AR 1-1	Planning, Programming and Budgeting within the Department of the Army, 25 May 1976
AR 11-18	Cost Analysis Program, 10 October 1975
AR 37-100	Army Management Structure Code, 1 August 1980
AR 37-100-83	The Army Management Structure (AMS), July 1982
AR 37-120	Army Procurement Appropriation (PA) Management Accounting and Reporting System (APARS), 1 November 1981 (with Change 1)
AR 37-200	Selected Acquisition Reports, 1 March 1979
AR 71-9	Materiel Objectives and Requirements, 1 April 1975
AR 700-120	Materiel Distribution Management for Major Items, 1 February 1980
AR 710-60	Standard Study Number System and Replacement Factors, 15 November 1982
AR 1000-1	Basic Policies for System Acquisition, 1 May 1983

DEPARTMENT OF DEFENSE

DOD 5000.1	Major Systems Acquisition, 29 March 1983
DOD 5000.2	Major Systems Acquisition Procedures, 8 March 1983
DOD 7110.1-M	Budget Guidance Manual, 4 August 1981
DOD 7220.0-H	Accounting Guidance Handbook, 1 February 1978

SUPPLY BULLETIN

SB 710-1-1	Standard Study Number System, 1 April 1978
------------	--

LIST OF REFERENCES (Continued)

OTHER REFERENCES

Army Guidance, Volume II, 3 September 1982
Army Modernization Information Memorandum (AMIM), August 1982
Army Program and Funds Control System (PFCS) Users Manual
30 September 1982
DA Budget Directive, August 1981
DRAFT, A Mission Area Structure for the Management of Army Resources,
DCA-P-XX, September 1981
Exhibit P-1, Supporting Data for the FY 83 President's Budget Estimate,
RCS DD-COMP(AR)1092, February 1982
Input Working Subsystem User Manual, 1 October 1981
Planning, Programming, Budgeting, and Execution System Handbook,
3d Ed, 1982
Program, Budget, and Accounting System Army Procurement Appropriation
Functional Description, 19 February 1982
Procurement Annex to the Five Year Defense Program, February 1982
Selected BLIN and Contractor Reports, DCA-R-94, 4 February 1983
Selected BLIN Reports, 28 February 1983, prepared by Budget Execution
and Reporting Division, USAFAC
Standard Study Number Scope Article (DESCOM), obtained February 1983,
with changes on page 1 as noted

In addition to the above publications, information was obtained from personnel
assigned to the following:

U. S. Army Finance and Accounting Center

Office of the Deputy Chief of Staff for
Research, Development, and Acquisition

U. S. Army Research, Development and
Acquisition Information Systems Agency

Office of the Chief of Staff (Program
Analysis and Evaluation Directorate)

APPENDIX B

BLIN LIST

The following list contains FY 83 BLIN's in the Direct Program. It does not contain BLIN's in the Customer (Reimbursable) Program; that is, there are no BLIN's representing procurement for Foreign Military Sales (FMS).

*** BLIN LIST ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
301001	AIRPLANE, CARGO, C-12A
301003	AIRPLANE, RECON, RC-12D (GR PIP)
301006	HELICOPTER, ELECT, EH-60A (Q-FIX) (ADV PROC)
301007	AH-64 ATTACK HELICOPTER
301008	AH-64 ATTACK HELICOPTER (ADV PROC)
301009	UH-60A (BLACK HAWK) (MYP)
301010	UH-60A (BLACK HAWK) (MYP) (ADV PROC)
301013	AIRPLANE, SURVEILLANCE, OV-1 (MOHAWK) (MODS)
301014	AIRPLANE, RECON, RC-12D (GR PIP MOD)
301015	AIRPLANE, RECONNAISSANCE, RV-1 (MODS)
301017	HELICOPTER, ATTACK AH-1 (COBRA-TOW) (MODS)
301018	HELICOPTER, CARGO, CH-47 (CHINOOK) (MODS)
301020	AIRPLANE, CARGO, C-12A (MODS)
301022	HELICOPTER, OBSERVATION, OH-58 (KIOWA) (MODS)
301025	ARMY HELICOPTER IMPROVEMENT PGM (AHIP)
301026	AIRBORNE AVIONICS
301027	MODIFICATIONS UNDER \$900,000
301028	AIRCRAFT 9WW
301029	SPARES AND REPAIR PARTS (AVIONICS)
301030	AVIONICS SUPPORT EQUIPMENT
301031	COMMON GROUND EQUIPMENT
301032	INDUSTRIAL FACILITIES
301033	WAR CONSUMABLES
301034	HELLFIRE LAUNCHERS
302003	U.S. ROLAND
302004	PATRIOT (SAM-D)
302005	STINGER
302006	LASER HELLFIRE SYSTEM
302008	TOW (BGM-71A) (BTM-71A)
302009	PERSHING (MGM-31A)
302010	MULTIPLE LAUNCH ROCKET SYSTEM (MYP)
302011	MULT. LAUNCH ROCKET SYS (MYP) (ADV PROC)
302012	OTHER MISSILE SUPPORT
302013	CHAPARRAL MODIFICATIONS
302015	TOW MODIFICATIONS
302016	LANCE MODIFICATIONS
302018	MODIFICATIONS LESS THAN \$900,000
302022	SPARES AND REPAIR PARTS
302023	AIR DEFENSE TARGETS
302024	ITEMS LESS THAN \$900,000 (MISSILES)
302025	PRODUCTION BASE SUPPORT
302026	OTHER PRODUCTION CHARGES
303002	CARRIER COMMAND POST LT FT M577A2
303003	CARRIER, PERSONNEL, FT, ARM, M113A2
303004	BRADLEY FIGHTING VEHICLES
303005	BRADLEY FIGHTING VEHICLES (ADV PROC)
303006	TRAINING DEVICES FOR IFV/CFV
303007	FIELD ARTILLERY AMMO SUPPORT VEHICLE
303008	RECOVERY VEHICLE, MED, FT, M88A1
303009	M1 ABRAMS TANK
303010	M1 ABRAMS TANK (ADV PROC)

*** BLIN LIST ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
303012	M60 SERIES TANK TRAINING DEVICES
303013	TRAINING EQUIPMENT FOR M1 SERIES TANK
303014	LIGHT ARMORED SQUAD CARRIER
303015	MOBILE PROTECTED GUN-CANNON VEHICLE
303016	MOBILE PROTECTED GUN-RECOVERY VEHICLE
303017	CARRIER, MODS ROLL
303018	IMPROVED TOW VEHICLE(TTV)
303019	FIST VEHICLE
303020	HOW, MED, ARM, SP, FT, 155MM, M109 SERIES(MODS)
303021	HOWITZER, HVY, SP, FT, 8", M110 SERIES(MODS)
303024	TANK, COMBAT, FT, 105MM GUN, M60 SER(MOD)
303025	SPARES AND REPAIR PARTS(TCV-WTCV)
303026	ITEMS LESS THAN \$900,000(TCV-WTCV)
303027	PRODUCTION BASE SUPPORT(TCV-WTCV)
303028	DIVAD GUN
303029	DIVAD GUN (ADV PROC)
303031	ARMOR MACHINE GUN, 7.62MM, M240 ROLL
303032	SQUAD AUTOMATIC WEAPON(SAW) 5.56MM
303033	LAUNCHER, SMOKE GRENADE, M239
303035	MORTAR, 81MM, XM252
303036	PERSONAL DEFENSE WEAPON, 9MM
303037	VEH RAPID FIRE WPN SYS-BUSHMASTER
303039	MAGNETIC HEADING SET
303040	MHS-GYRO GROUP
303042	MODIFICATIONS UNDER \$900,000(WOCV-WTCV)
303043	SPARES AND REPAIR PARTS(WOCV-WTCV)
303044	ITEMS LESS THAN \$900,000(WOCV-WTCV)
303045	PRODUCTION BASE SUPPORT(WOCV-WTCV)
304001	NUCLEAR WEAPONS SUPPORT MATERIAL
304002	NUCLEAR MUNITIONS
304004	CARTRIDGE, 5.56MM, ALL TYPES
304005	CARTRIDGE, 7.62MM, ALL TYPES
304006	CARTRIDGE, CAL .22, ALL TYPES
304007	CARTRIDGE, CAL .45, ALL TYPES
304008	LIMITED RANGE/PLASTIC AMMO ALL TYPES
304009	CTG CAL .50 ALL TYPES
304010	CARTRIDGE, 14.5MM, WITH FUZE, ALL TYPES
304011	CARTRIDGE, 20MM, ALL TYPES
304012	CARTRIDGE, 30MM(ADEN/DEFA), ALL TYPES
304013	CARTRIDGE, 25MM(BUSHMASTER), ALL TYPES
304014	CARTRIDGE, 40MM(DIVADS), ALL TYPES
304015	CARTRIDGE, 40MM(CONVENTIONAL), ALL TYPES
304016	CARTRIDGE, 60MM, LWCMS ALL TYPES
304017	CARTRIDGE, 81MM(CONVENTIONAL), ALL TYPES
304019	CARTRIDGE, 4.2 INCH, ALL TYPES
304020	CARTRIDGE, 105MM(HEAT-T/TP), ALL TYPES
304021	CARTRIDGE, 105MM(APFSDS-T/TP), ALL TYPES
304022	CARTRIDGE, 120MM, ALL TYPES
304023	PROJECTILE, 155MM(CONVENTL), ALL TYPES
304024	PROJECTILE, 155MM, HE, ICM(DP)
304025	PROJECTILE, 155MM, HE, RAP

*** BLIN LIST ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
304026	PROJECTILE, 155MM, (ADAM/RAAMS), ALL TYPES
304027	PROJECTILE, 155MM HE COPPERHEAD
304028	PROJECTILE, 155MM WP SMK SCREENING
304029	CHEMICAL MUNITIONS
304030	CHARGE, PROPELLING, 155MM, WHITE BAG
304031	PROJECTILE, 8 INCH, HE, ICM(DP)
304032	PROJECTILE, 8 INCH, HE, RAP
304033	FUZE, TIME, F/ARTY & MORTAR, ALL TYPES
304034	GROUND EMPLACED MINE SCATTERING SYSTEM
304037	DEMOLITION MUNITIONS
304039	VIPER, ALL TYPES
304040	ROCKET, 2.75 INCH, LSFFAR, ALL TYPES
304041	HAND GRENADES, ALL TYPES
304043	SIGNALS, ALL TYPES
304044	SIMULATORS, ALL TYPES
304045	AMM COMPONENTS/SUPPORT, ALL TYPES
304046	LESS THAN \$900,000
304047	SPARES AND REPAIR PARTS(AMMO)
304048	9TH ID HIGH TECHNOLOGY TEST BED(HTTB)
304049	PROVISION OF INDUSTRIAL FACILITIES
304050	LAYAWAY OF INDUSTRIAL FACILITIES
304051	MANUFACTURING TECHNOLOGY PROGRAM
305005	SEMITRAILER, B/B CONT 22 1/2 T M871 C/S
305008	SEMITRAILER, VAN, ELECTRONIC, 6T, 2W, M373A2
305014	TRAILER, HEAVY, EXPANDED MOBILITY
305015	HIGH MOBILITY MULTI-PURPOSE WHEELED VEH
305016	COMMERCIAL UTILITY CARGO VEHICLE
305017	SMALL UNIT SUPPORT VEHICLE(SYSV)
305018	TRUCK ST 6X6 ABT
305019	TRUCK, 10T, 8X8, ART
305023	ITEMS LESS THAN \$900,000(TAC VEH)
305024	PASSENGER CARRYING VEHICLES
305025	GENERAL PURPOSE VEHICLES
305026	SPECIAL PURPOSE VEHICLES
305027	SPARES AND REPAIR PARTS(TAC)
305028	PRODUCTION BASE SUPPORT(TAC)
305030	JCSE EQUIPMENT(USREDCOM)
305031	CLASSIFIED PROJECT 9WW
305032	CABLE ORDERWIRE UNIT(COU) T5-3647
305033	CENTR OFF TP AUTO AN/TTC-39(V)3
305034	CENTR OFF TP AUTO AN/TTC-39(V)1
305035	CENTR MSG SW AUTO AN/TYC-39(V)1
305037	COM NOD CON AN/TSQ-111(I)
305038	COM NOD CON AN/TSQ-111(III)
305039	DIGITAL DATA MODEM, MD-1065
305040	DIG NSEC VTER TA-954
305041	DIGITAL NON-SECURE VOICE TERM, TA-984
305042	GROUP MODEM(GM)MD-1026
305043	HI-SP CAB DR MOD(HSCDM)MD-1024
305044	HI-SP PULSE RESTOR(HSPR)TD-1219
305046	LOW SP CAB DR MOD(LSCDM)MD-1023

*** BLIN LIST ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
305047	LOW SP PULSE RESTOR(LSPR)TD-1218
305048	MAINTENANCE SHELTER, AN/ARM-164
305049	MASTER GROUP MUX(MGM), TD-1237
305051	ORDERWIRE CONTROL UNIT(OCU) I
305052	ORDERWIRE CONTROL UNIT(OCU) II
305053	RADIO REPEATER SET, AN/TRC-174
305054	RADIO TERMINAL SET, AN/TRC-173
305055	REMOTE LOOP GP MUX(RLGM), TD-1233
305056	REMOTE LOOP GP MUX-COM(RLGM-CDM), MD-1025
305057	REMOTE MUX COMBINER(RMC), TD-1234
305059	STD SRWBR, AN/TRC-175
305060	TAC DIG FAX(TDF)AN/UXC-4
305061	TRUNK GROUP MUX(TGM), TD-1236
305066	RADIO TERMINAL, AN/TRC-170(V)III
305067	MOD OF IN-SVC EQ(TRI-TAC)
305069	SINCGARS(ROLL)
305070	CABLE ASSEMBLY, CX-1123/6
305073	COMMUNICATIONS CENTRAL, AN/TSC-99
305074	DATA BUF HI SPEED, TD-1065
305075	DATA MULTIPLEXER, TD-1069
305077	DIGITAL MESSAGE ENTRY DEVICES(CSC)
305078	HAND CRANK GENERATOR, 6-76
305079	HF RADIO, AN/GRC-193
305080	HF RADIO, AN/PRC-104
305081	AN/TRQ-35 CHIRP SOUNDER
305086	AN/TRC-113 RADIO REPEATER
305089	RADIO SET, AN/GRC-103
305090	RADIO SET, AN/PRC-70
305092	RADIO SET AN/VRC-12
305094	HALF-RHOMBIC ANTENNA, OE-303
305095	LOG PERIODIC DIRECTIONAL ANTENNA, OE-314
305096	TEST SET, AN/PRM-34
305098	CSEP ANT AS 2259
305100	RADIO TERMINAL AN/TRC-145
305103	SMALL UNIT TRANS, AN/PRC-68
305104	STEER NULL ANT PROC, CP-1380
305106	TELEPHONE, FIELD, TA-838
305108	TELETYPEWRITER TERMINAL, AN/UGC-74
305111	FM MULTIPLEXER TD-1289
305112	MOD OF IN-SVC EQUIP(CSC)
305113	ITEMS LESS THAN \$900,000 (CSC-C-E)
305115	JOINT CRISIS MGMT CAPABILITY
305117	AR TELECOM AUTO PR(ATCAP)
305118	C-E FACILITIES/PROJECTS
305119	ELECTROMAG COMP PROG(EMCP)
305121	ITEMS LESS THAN \$900,000(STAR-NDCS)
305122	SECURE VOICE, IMPROVEMENT PGM
305123	TRANSMISSION MEDIA(DCS)
305124	WW TECH CON IMP PR(WWTCIP)
305125	DIGITAL EQUIPMENT(DSCS)
305126	INTERCONNECT FACILITY(DCSC)

*** BLIN LIST ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
305127	JAM RESISTANT COM(SATCOM)
305129	MED TRNS TERM EQUIP,AN/GSC-39(V)4
305130	SPREAD SPECT MULTI ACCESS(DSCS)
305131	DSCS OPNS CONTROL SYSTEM(DOCS)
305132	MOD IN-SVC EQUIP(DSCS)
305137	SAT COM TERM,AN/TSC-85
305138	SAT COM TERM,AN/TSC-93
305139	MOD IN-SVC EQUIP(TAC STAT)
305140	EU COM C3 SYSTEM(NWS)
305141	EU COM STAT WR HQ(SW HQ)
305142	AUTO KEY DC HGX-83/TSEC
305144	SEC VO IMPRV PRG(COMSEC)
305145	BERDAN KGV-9(MEM)
305146	DED LOOP ENCRYP DEV KG-84
305148	DIG SUB BOICE TSEC/KY-68
305150	ELEC TRAN DEV,KYK-13/TSEC
305151	INT LEV T SET TSEC/ST-34
305153	LOOP KEY GEN TSEC/KG-82
305154	MSG ENCYPT MODULE KN-2(MABREY)
305155	MONITORING EQUIPMENT(COMSEC)
305156	NET CON DEV KYX-15/TSEC
305157	SPEECH SECUR EQ TSEC/KY-57
305158	SPEECH SECUR EQ TSEC/KY-58
305159	SPEECH SECUR EQ TSEC/KY-65
305160	TEMPEST(COMSEC)
305161	TNK ENCPY DEV TSEC/KG-81
305163	UMSTEAD CC(C1-11-1)
305164	UMSTEAD RT(C1-11-2)
305165	BATSON I,TSEC/C1-14
305166	ITEMS LESS THAN \$900,000(COMSEC)
305167	BASE COMM(FORSCOM)
305168	BASE COMM(EU COM)
305169	BASE COMM(PACOM)
305171	TMDE MODERNIZATION
305173	4TH PSYOP GROUP
305175	TEAM PACK,AN/MSQ-103
305176	MOD IN SVC EQ(INT SPT)
305177	INTELLIGENCE COMMUNICATION EQUIP
305178	ITEMS LESS THAN \$900,000(INT SPT-C-E)
305179	TROJAN
305180	SIGINT SIMULATOR
305181	SOFTCOPY IMAGERY TRAINING DEVICE
305182	INTELLIGENCE DATA HANDLING SYS(IDHS)
305183	TECH RECON AND SURV SYS(TECRAS)
305184	ITEMS LESS THAN \$900,000(GDIP-C-E)
305185	VERT INSTL AUTO BASELINE(VIABLE-BASOPS)
305186	BATTERY COMPUTER SYSTEM
305187	DARCOM FIVE YEAR ADP PROGRAM
305188	TRADOC AUTOMATION
305190	ADPE FOR NON TACT MGT INFO SYS
305194	MANEUVER CONTROL SYS

*** BLIN LIST ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
305196	DECENTZED AUTO SER SUP SYS(DASA3)
305197	DIV LEVEL DATA ENTRY DEVICE(DLDED)
305199	WW MIL COM & CONT SYS ADPE
305200	AFRTS(AUDIO VISUAL)
305202	ITEMS LESS THAN \$900,000(A/V-C-E)
305203	JAMMER, HAND EMPLACED, EXPENDABLE
305205	MANPACK RADIO OF SYSTEM(MRDFS)
305206	PIRANHA, APPLIQUE JAMMER MOD KIT
305209	CHARGER, RADIAC DETECTOR PP-4370/PD
305210	BATTERY CHARGER, PP-7286/IU
305213	METEOROLOGICAL DATA SYSTEM(FAMAS)
305215	GROUND LASER LOCATOR DESIGNATOR(GLLD)
305217	INTRUSION DETECTION DEVICES
305219	BOTTLE CLEANING CHARGING STATION AN/TAM-4
305221	NIGHT SIGHT, INFRARED, AN/TAS-4
305222	NIGHT SIGHT, INFRARED, AN/TAS-5
305223	NIGHT VISION GOGGLES AN/PVS-5
305227	POSITION LOCATION REPORTING SYS(PLRS)
305230	RADAR SET, ARTILLERY LOCATING AN/TPQ-37
305233	TACTICAL DOSIMETER, IM-185
305234	TAC ELEC SURV SVS
305236	MODIFICATION OF IN-SVC EQ(TAC EL)
305237	ITEMS LESS THAN \$900,000 (TACT ELEC-C-E)
305240	TEST STATION 00-290(VII)MSM
305241	EQUIP REPAIR FAC(ERF)
305242	PRODUCTIVITY INVESTMENT FUNDING
305243	SPARES AND REPAIR PARTS(TELECOM-C-E)
305244	QUICK RETURN ON INVESTMENT(ORIP)PGM
305245	SPARE/REPAIR PARTS(COMSEC)
305246	SPARES AND REPAIR PARTS(OTHER C-E)
305248	PRODUCTION BASE SUPPORT(C-E)
305250	AIR CONDITIONERS, VARIOUS SIZES, CAPACITIES
305251	ALARM, CHEMICAL AGENT, AUTO, PORT, M8 SERIES
305252	DETECTOR, CHEMICAL AGENT, M43A1
305258	BRIDGE, FLOAT-RIBBON, TRANSPORTER
305263	COMPRESSOR, AIR, RCP, 5 CFM, 175 PSI
305267	DECONTAMINATE APP PWR DR LT WT XM17
305269	DETECTION-WARNING SYSTEM BIOLOGICAL
305270	SIM DET CHEM AGENT AUTO ALARM XM81
305271	DISPENSER, MINE, XM128(GEMSS)
305272	DIVING EQUIPMENT
305275	FIRETRUCKS
305276	FORWARD AREA REFUELING EQUIPMENT(FARE)
305279	HOSELINE OUTFIT FUEL HANDLING
305280	MASK, PROTECTIVE, NBC
305281	MINE CLEARING ROLLER
305282	MODULAR, COLLECTIVE PROTECTIVE EQUIP
305283	COMBAT ZONE HOSPITAL EQUIP (C2H)
305284	POSITION/AZIMUTH DETERMINING SYS (PADS)
305285	PROT OUTFIT, MICROCLIMATE CONTROLLED
305286	PUMP ASSY LIQ GAS WHL 4 IN OUTLET, 350 SPM

*** BLIN LIST ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
305295	TANK AND PUMP UNIT, LIQ DISP,F/TRK MOUNTING
305296	TANK ASSEMBLY,FAB,COLLAPSIBLE,POL 100006
305298	TACTICAL WATER DISTRIBUTION SYS
305300	TAG,PRINTING & BINDING EQUIPMENT
305301	TOPO SUPPORT SYSTEM
305305	CBT SOP EQUIP MEDICAL
305306	WATER SUPPORT FOR THE RDF
305307	ITEMS LESS THAN \$900,000 (CS EQ-OTH)
305308	MODIFICATIONS OF IN SERVICE EQUIP (CSE)
305310	COMPRESSOR AIR ROTARY,250 CFM,100 PSI
305313	SMALL EMPLACEMENT EXCAVATOR (SEE)
305316	DRILL,MACH. WELL RTV,TRL,DSLS-7/80 1500 FT
305317	GRADER ROAD MOTORIZED HUV 6X4 (CCE)
305318	LOADER,SCOOP TYPE, DD 4WHL,2 1/2 CU YD
305319	PNEUMATIC TOOL COMPRESSOR OUTFIE 250 CFM TRL
305323	SCRAPER,EARTHMOVING,14-180 CU YD
305327	MODS OF IN SERVICE EQUIP (CONST EQ)
305328	ITEMS LESS THAN \$900,000 (CONST EQ-OTH)
305329	AIR CUSHION VEHICLE,LACV-30
305331	RAILWAY CAR,FLAT,140 TON
305334	ITEMS LESS THAN \$900,000 (FLT.RAIL EQ)
305335	GENERATORS AND ASSOCIATED EQUIPMENT
305340	TRUCK,FORK LIFT,DE,PT,RT, 6000 LB
305341	TRUCK,FORK LIFT,DE,PT,RT, 10000 LB
305342	TRUCK,FORK LIFT,DE,PT,RT,50000 LB
305345	TRK FORK LFT ELC SRT FRT/SIDE LDR 4000 LB
305350	MODIFICATIONS OF IN SERVICE EQUIP (MHE)
305351	ITEMS LESS THAN \$900,000 (MAT HAND EQ)
305352	MEDICAL SUPPORT EQUIPMENT
305353	CALIBRATION SET SUPPORT
305354	SPARES AND REPAIR PARTS (OTHER)
305355	NATIONAL TRAINING CTR SUP
305356	SPECIAL EQUIPMENT FOR USER TESTING
305357	QUICK RETURN ON INVESTMENT PROGRAM
305358	PROD ENHANCING CAPITAL INVEST PRGM
305359	PRODUCTIVITY INVESTMENT PROGRAM
305361	TRAINING DEVICES, NONSYSTEM
305362	BASE LEVEL COML EQUIPMENT
305363	PRODUCTION BASE SUPPORT (OTHER)
305365	HOST NATION SUPPORT - EUROPE

APPENDIX C
SYSTEM LIST

The following list of Army systems (materiel and non-materiel) by system class was used in constructing the correlation tables. It was taken from Tables 4-3 and 4-4 of ODCA draft paper, titled "A Mission Area Structure for the Management of Army Resources," DCA-P-XX, dated September 1981.

*** SYSTEM LIST ***

MATERIEL SYSTEMS

CLASS SYSTEM

AIRCRAFT

AH-1S
AAH-64
OH-58C
RPV
UH-1
UH-60A
CH-47D
AHIP

MISSILES

TOW
IMAAWS
DRAGON
PERSHING
MLRS
LANCE
HONEST JOHN
SERGEANT
CSWS
DSWS
REDEYE
STINGER
CHAPARRAL
ROLAND
HAWK
NIKE HERCULES
PATRIOT
HELLFIRE

ELECTRONICS

PEWS
MILES
IRETS
ARTBASS
TACFIRE
RADAR CHRONOGRAPH, M90
BCS
GLLD
FIREFINDER
AN/TMQ-31
FORWARD AREA LASER WEAPON
SOTAS
TRAILBLAZER
QUICKLOOK
QUICKFIX
GUARDRAIL
TEAMPACK
ELECTRONICS COUNTERMEASURES SYSTEMS

*** SYSTEM LIST ***

MATERIEL SYSTEMS

<u>CLASS</u>	<u>SYSTEM</u>
ELECTRONICS	COMMUNICATIONS INTELLIGENCE SYSTEMS INTEL DATA COLL & PROCESSING SYS AN/MYQ-4 COMPUTER SYSTEMS TRITAC CNCS LOCATION SYSTEMS TACSATCOM THEATER/TACTICAL COMMUNICATIONS SYSTEMS COMMUNICATION SECURITY SYSTEMS MANUEVER CONTROL SYSTEM
TRACKED COMBAT VEHICLES	M1 M60A3 M113/M557 IFV/CFV MPG/AMAS FISTV FAASV
CANNON ARTILLERY, MORTARS & GUN	MORTAR SYSTEMS M198 M109 M101 M102 OFT VULCAN DIVAD
ENGINEERING & RELATED SYSTEMS	CEV UET IMPROVED FLOAT BRIDGE SYS MINE/COUNTERMINE SYS WATER PURIFICATION EQUIP
GROUND VEHICLES	SUSV FORKLIFTS M88 M578 LACV-30 M809 M915 M878 SEMI TRAILER, 34 TON

*** SYSTEM LIST ***

MATERIEL SYSTEMS

<u>CLASS</u>	<u>SYSTEM</u>
GROUND VEHICLES	HEMTT HMMWV
AMMUNITION	AMMUNITION
OTHER	UNIT WEAPONS SYSTEMS PROTECTIVE MASKS DECONTAMINATION APPARATUSES BIOLOGICAL DETECT & WARNING SYS NBC SHELTER SYSTEM, M51 DSU/GSU MAINTENANCE SYSTEMS SLEEP MOBILE FIELD KITCHEN TRAILER TOPOGRAPHIC SUPPORT SYSTEM

*** SYSTEM LIST ***

NON-MATERIEL SYSTEMS

<u>CLASS</u>	<u>SYSTEM</u>
HEALTH CARE	FIELD MEDICAL SUPPORT HEALTH CARE IN FACILITIES MEDICAL MANAGEMENT HQ MEDICAL PROFESSIONAL DEVELOPMENT MEDICAL MANPOWER/PERSONNEL MGT MEDICAL MATERIEL MANAGEMENT MISC MEDICAL ACTIVITIES
INSTALLATION MANAGEMENT	INSTALLATION MGT HQ HOUSING SUPPORT INSTALLATION MAINT/SVC OPS MORALE & WELFARE OPS AUTOMATION/COMMUNICATIONS SVCS
PERSONNEL & RELATED SERVICES	TACTICAL PERSONNEL & ADMIN OPS PSYOPS/CIVIL AFFAIRS OPS PERSONNEL/ADMIN/FIN SVCS RECRUITING RESERVE COMPONENT SUPPORT
SUPPORT OUTSIDE ARMY	DOD/JOINT SUPPORT SUPPORT TO OTHER GOVT AGENCIES SUPPORT TO OTHER NATIONS
DEFENSE RSCH/ADV TECH DEV	DEFENSE RESEARCH MATERIEL/COMBAT DEV ACTIVITIES
INTELLIGENCE ACTIVITIES	THEATER/TACTICAL INTELLIGENCE ARMY-WIDE INTELLIGENCE DOD/NATIONAL INTELLIGENCE
ARMY HEADQUARTERS	ARMY MANAGEMENT HEADQUARTERS CLOSE COMBAT COMMAND & CONTROL FIRE SUPPORT/AIR DEF COM & CONT COMBAT SUPPORT COMMAND & CONTROL COMBAT SVC SUPPORT COM & CONT
TRAINING	PRECOMMISSIONING TRAINING TRAINING MGT/DEVELOPMENT UNIT TRAINING ACTIVITIES ACCESSION/PROFESSIONAL TRAINING

*** SYSTEM LIST ***

NON-MATERIEL SYSTEMS

<u>CLASS</u>	<u>SYSTEM</u>
GROUND COMBAT/COMBAT SUPPORT	
	CLOSE COMBAT
	FIRE SUPPORT
	AIR DEFENSE
	NBC COMBAT SUPPORT
	COMMUNICATIONS COMBAT SUPPORT
TRANSPORTATION/TRAFFIC MGT	
	TRANS COMBAT SVC SUPPORT OPS
	TRANSPORTATION OPS
ENGINEER SVCS/CIVIL WORKS	
	ENGINEER COMBAT SUPPORT
	BASE/FACILITY ENG SUPPORT
	ENGINEER COMBAT SVC SUPPORT
POLICE & SECURITY	
	POLICE COMBAT SUPPORT
	NON-TACTICAL POLICE SUPPORT
PRODUCTION BASE SUPPORT	
	PRODUCTION BASE SUPPORT
CENTRAL SUPPLY & MAINT	
	TACTICAL SUPPLY OPS
	TACTICAL MAINT OPS
	WHOLESALE SUPPLY
	SERVICE OPERATIONS
	DEPOT MAINTENANCE

APPENDIX D
CORRELATION TABLE ONE
(Materiel System)

This table gives the BLIN's associated with the materiel systems.

*** CORRELATION TABLE ONE ***

MATERIEL SYSTEMS

CLASS SYSTEM BLIN NOMENCLATURE

AIRCRAFT

AH-1S			
* AH-64	301017	HELICOPTER, ATTACK AH-1(COBRA-TOW)(MODS)	
	301007	AH-64 ATTACK HELICOPTER	
	301008	AH-64 ATTACK HELICOPTER(ADV PROC)	
OH-58C			
* UH-60A	301022	HELICOPTER, OBSERVATION, OH-58(KIOWA)(MODS)	
	301009	UH-60A(BLACK HAWK)(MYP)	
	301010	UH-60A (BLACK HAWK)(MYP)(ADV PROC)	
* CH-47D	301018	HELICOPTER, CARGO, CH-47(CHINOOK)(MODS)	
AHIP	301025	ARMY HELICOPTER IMPROVEMENT PGM(AHIP)	

MISSILES

TOW			
	302008	TOW (BGM-71A)(BTM-71A)	
	302015	TOW MODIFICATIONS	
	303018	IMPROVED TOW VEHICLE(ITV)	
DRAGON			
* PERSHING	305222	NIGHT SIGHT, INFRARED, AN/TAS-5	
* MLRS	302009	PERSHING (MGM-31A)	
	302010	MULTIPLE LAUNCH ROCKET SYSTEM (MYP)	
	302011	MULT.LAUNCH ROCKET SYS(MYP)(ADV PROC)	
LANCE			
* STINGER	302016	LANCE MODIFICATIONS	
	302005	STINGER	
CHAPARRAL			
	302013	CHAPARRAL MODIFICATIONS	
ROLAND			
	302003	U.S.ROLAND	
* PATRIOT	302004	PATRIOT (SAM-D)	
* HELLFIRE			
	301034	HELLFIRE LAUNCHERS	
	302006	LASER HELLFIRE SYSTEM	

ELECTRONICS

BCS			
	305186	BATTERY COMPUTER SYSTEM	
GLLD			
	305215	GROUND LASER LOCATOR DESIGNATOR(GLLD)	

* SAR SYSTEMS

*** CORRELATION TABLE ONE ***

MATERIEL SYSTEMS

<u>CLASS</u>	<u>SYSTEM</u>	<u>BLIN</u>	<u>NOMENCLATURE</u>
ELECTRONICS			
FIREFINDER			
	305230		RADAR SET,ARTILLERY LOCATING AN/TPQ-37
TEAMPACK			
	305175		TEAM PACK,AN/MSQ-103
ELECTRONICS COUNTERMEASURES SYSTEMS			
	305203		JAMMER,HAND EMPLACED,EXPENDABLE AN/MYQ-4
	305196		DECENTZED AUTO SER SUP SYS(DASA3)
*TRITAC			
	305033		CENTR OFF TP AUTO AN/TTC-39(V)3
	305034		CENTR OFF TP AUTO AN/TTC-39(V)1
	305035		CENTR MSG SW AUTO AN/TYC-39(V)1
CNCS			
	305037		COM NOD CON AN/TSQ-111(I)
	305038		COM NOD CON AN/TSQ-111(III)
LOCATION SYSTEMS			
	305227		POSITION LOCATION REPORTING SYS(PLRS)
TACSATCOM			
	305137		SAT COM TERM,AN/TSC-85
	305138		SAT COM TERM,AN/TSC-93
THEATER/TACTICAL COMMUNICATIONS SYSTEMS			
	305040		DIG NSEC VTER TA-954
	305041		DIGITAL NON-SECURE VOICE TERM,TA-984
	305053		RADIO REPEATER SET,AN/TRC-174
	305054		RADIO TERMINAL SET,AN/TRC-173
	305059		STD SRWBR,AN/TRC-175
	305069		SINCgars(ROLL)
	305074		DATA BUF HI SPEED,TD-1065
	305103		SMALL UNIT TRANS,AN/PRC-68
	305108		TELETYPEWRITER TERMINAL,AN/UGC-74
	305197		DIV LEVEL DATA ENTRY DEVICE(DLDDED)
COMMUNICATION SECURITY SYSTEMS			
	305148		DIG SUB BOICE TSEC/KY-68
	305153		LOOP KEY GEN TSEC/KG-82
	305157		SPEECH SECUR EQ TSEC/KY-57
	305161		TNK ENCPY DEV TSEC/KG-81
MANUEVER CONTROL SYSTEM			
	305194		MANEUVER CONTROL SYS
 TRACKED COMBAT VEHICLES			
*M1			
	303009		M1 ABRAMS TANK
	303010		M1 ABRAMS TANK(ADV PROC)
	303013		TRAINING EQUIPMENT FOR M1 SERIES TANK
M60A3			
	303012		M60 SERIES TANK TRAINING DEVICES
	303024		TANK,COMBAT,FT,105MM GUN,M60 SER(MOD)

*** CORRELATION TABLE ONE ***

MATERIEL SYSTEMS

<u>CLASS</u>	<u>SYSTEM</u>	<u>BLIN</u>	<u>NOMENCLATURE</u>
TRACKED COMBAT VEHICLES			
M113/M557			
303002 CARRIER COMMAND POST LT FT M577A2			
303003 CARRIER,PERSONNEL,FT,ARM,M113A2			
* IFV/CFV			
303004 BRADLEY FIGHTING VEHICLES			
303005 BRADLEY FIGHTING VEHICLES(ADV PROC)			
303006 TRAINING DEVICES FOR IFV/CFV			
303037 VEH RAPID FIRE WPN SYS-BUSHMASTER			
MPG/AMAS			
303015 MOBILE PROTECTED GUN-CANNON VEHICLE			
303016 MOBILE PROTECTED GUN-RECOVERY VEHICLE			
FISTV			
303019 FIST VEHICLE			
FAASV			
303007 FIELD ARTILLERY AMMO SUPPORT VEHICLE			
CANNON ARTILLERY, MORTARS & GUN			
MORTAR SYSTEMS			
303035 MORTAR,81MM,XM252			
M109			
303020 HOW, MED, ARM, SP, FT, 155MM, M109 SERIES(MODS)			
* DIVAD			
303028 DIVAD GUN			
303029 DIVAD GUN (ADV PROC)			
ENGINEERING & RELATED SYSTEMS			
IMPROVED FLOAT BRIDGE SYS			
305258 BRIDGE,FLOAT-RIBBON,TRANSPORTER			
MINE/COUNTERMINE SYS			
304034 GROUND EMPLACED MINE SCATTERING SYSTEM			
305271 DISPENSER,MINE,XM128(GEMSS)			
GROUND VEHICLES			
SUSV			
305017 SMALL UNIT SUPPORT VEHICLE(SYSV)			
FORKLIFTS			
305340 TRUCK,FORK LIFT,DE,PT,RT, 6000 LB			
305342 TRUCK,FORK LIFT,DE,PT,RT,50000 LB			
305345 TRK FORK LFT ELC SRT FRT/SIDE LDR 4000 LB			
M88			
303008 RECOVERY VEHICLE, MED, FT, M88A1			
LACV-30			
305329 AIR CUSHION VEHICLE,LACV-30			
M809			
305018 TRUCK ST 6X6 ABT			
HMMWV			
305015 HIGH MOBILITY MULTI-PURPOSE WHEELED VEH			

*** CORRELATION TABLE ONE ***

MATERIEL SYSTEMS

<u>CLASS</u>	<u>SYSTEM</u>	<u>BLIN</u>	<u>NOMENCLATURE</u>
AMMUNITION			
AMMUNITION			
	304001		NUCLEAR WEAPONS SUPPORT MATERIAL
	304002		NUCLEAR MUNITIONS
	304004		CARTRIDGE, 5.56MM, ALL TYPES
	304005		CARTRIDGE, 7.62MM, ALL TYPES
	304006		CARTRIDGE, CAL .22, ALL TYPES
	304007		CARTRIDGE, CAL .45, ALL TYPES
	304008		LIMITED RANGE/PLASTIC AMMO ALL TYPES
	304009		CTG CAL .50 ALL TYPES
	304010		CARTRIDGE, 14.5MM, WITH FUZE, ALL TYPES
	304011		CARTRIDGE, 20MM, ALL TYPES
	304012		CARTRIDGE, 30MM(ADEN/DEFA), ALL TYPES
	304013		CARTRIDGE, 25MM(BUSHMASTER), ALL TYPES
	304014		CARTRIDGE, 40MM(DIVADS), ALL TYPES
	304015		CARTRIDGE, 40MM(CONVENTIONAL), ALL TYPES
	304016		CARTRIDGE, 60MM, LWCMS ALL TYPES
	304017		CARTRIDGE, 81MM(CONVENTIONAL), ALL TYPES
	304019		CARTRIDGE, 4.2 INCH, ALL TYPES
	304020		CARTRIDGE, 105MM(HEAT-T/TP), ALL TYPES
	304021		CARTRIDGE, 105MM(APFSDS-T/TP), ALL TYPES
	304022		CARTRIDGE, 120MM, ALL TYPES
	304023		PROJECTILE, 155MM(CONVENTL), ALL TYPES
	304024		PROJECTILE, 155MM, HE, ICM(DP)
	304025		PROJECTILE, 155MM, HE, RAP
	304026		PROJECTILE, 155MM, (ADAM/RAAMS), ALL TYPES
*	304027		PROJECTILE, 155MM HE COPPERHEAD
	304028		PROJECTILE, 155MM WP SMK SCREENING
	304029		CHEMICAL MUNITIONS
	304030		CHARGE, PROPELLING, 155MM, WHITE BAG
	304031		PROJECTILE, 8 INCH, HE, ICM(DP)
	304032		PROJECTILE, 8 INCH, HE, RAP
	304033		FUZE, TIME, F/ARTY & MORTAR, ALL TYPES
	304037		DEMOLITION MUNITIONS
	304039		VIPER, ALL TYPES
	304040		ROCKET, 2.75 INCH, LSFFAR, ALL TYPES
	304041		HAND GRENADES, ALL TYPES
	304043		SIGNALS, ALL TYPES
	304044		SIMULATORS, ALL TYPES
	304045		AMM COMPONENTS/SUPPORT, ALL TYPES
OTHER			
UNIT WEAPONS SYSTEMS			
	303032		SQUAD AUTOMATIC WEAPON(SAW) 5.56MM
NBC SHELTER SYSTEM, M51			
	305280		MASK, PROTECTIVE, NBC
DSU/GSU MAINTENANCE SYSTEMS			
	305219		BOTTLE CLEANING CHARGING STATION AN/TAM-4

*** CORRELATION TABLE ONE ***

MATERIEL SYSTEMS

<u>CLASS</u>	<u>SYSTEM</u>	<u>BLIN</u>	<u>NOMENCLATURE</u>
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OTHER

TOPOGRAPHIC SUPPORT SYSTEM			
305301	TOPO SUPPORT SYSTEM		

APPENDIX E

CORRELATION TABLE TWO
(Non-Materiel Systems)

This table gives the BLIN's associated with the non-materiel systems.

*** CORRELATION TABLE TWO ***

NON-MATERIEL SYSTEMS

<u>CLASS</u>	<u>SYSTEM</u>	<u>BLIN</u>	<u>NOMENCLATURE</u>
HEALTH CARE	FIELD MEDICAL SUPPORT	305305	CBT SOP EQUIP MEDICAL
INSTALLATION MANAGEMENT	INSTALLATION MAINT/SVC OPS	305275	FIRETRUCKS
PERSONNEL & RELATED SERVICES	PSYOPS/CIVIL AFFAIRS OPS	305173	4TH PSYOP GROUP
SUPPORT OUTSIDE ARMY	DOD/JOINT SUPPORT	305115	JOINT CRISIS MGMT CAPABILITY
	SUPPORT TO OTHER NATIONS	305365	HOST NATION SUPPORT - EUROPE

APPENDIX F
BLIN'S NOT ASSOCIATED WITH SYSTEMS

The BLIN's listed on pages F-2 through F-6 are those that could not be identified with any one system.

However, in an extended effort to deal with these BLIN's, subjective analysis was used in an attempt to place them in the "most likely" system classes. This list follows on pages F-7 through F-11.

*** BLINS NOT ASSOCIATED WITH SYSTEMS ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
301001	AIRPLANE, CARGO, C-12A
301003	AIRPLANE, RECON, RC-12D (GR PIP)
301006	HELICOPTER, ELECT. EH-60A (Q-FIX) (ADV PROC)
301013	AIRPLANE, SURVEILLANCE, OV-1 (MOHAWK) (MODS)
301014	AIRPLANE, RECON, RC-12D (GR PIP MOD)
301015	AIRPLANE, RECONNAISSANCE, RV-1 (MODS)
301020	AIRPLANE, CARGO, C-12A (MODS)
301026	AIRBORNE AVIONICS
301027	MODIFICATIONS UNDER \$900,000
301028	AIRCRAFT 9WW
301029	SPARES AND REPAIR PARTS (AVIONICS)
301030	AVIONICS SUPPORT EQUIPMENT
301031	COMMON GROUND EQUIPMENT
301032	INDUSTRIAL FACILITIES
301033	WAR CONSUMABLES
302012	OTHER MISSILE SUPPORT
302018	MODIFICATIONS LESS THAN \$900,000
302022	SPARES AND REPAIR PARTS
302023	AIR DEFENSE TARGETS
302024	ITEMS LESS THAN \$900,000 (MISSILES)
302025	PRODUCTION BASE SUPPORT
302026	OTHER PRODUCTION CHARGES
303014	LIGHT ARMORED SQUAD CARRIER
303017	CARRIER, MODS ROLL
303021	HOWITZER, HVY, SP, FT, 8", M110 SERIES (MODS)
303025	SPARES AND REPAIR PARTS (TCV-WTCV)
303026	ITEMS LESS THAN \$900,000 (TCV-WTCV)
303027	PRODUCTION BASE SUPPORT (TCV-WTCV)
303031	ARMOR MACHINE GUN, 7.62MM, M240 ROLL
303033	LAUNCHER, SMOKE GRENADE, M239
303036	PERSONAL DEFENSE WEAPON, 9MM
303039	MAGNETIC HEADING SET
303040	MHS-GYRO GROUP
303042	MODIFICATIONS UNDER \$900,000 (WOCV-WTCV)
303043	SPARES AND REPAIR PARTS (WOCV-WTCV)
303044	ITEMS LESS THAN \$900,000 (WOCV-WTCV)
303045	PRODUCTION BASE SUPPORT (WOCV-WTCV)
304046	LESS THAN \$900,000
304047	SPARES AND REPAIR PARTS (AMMO)
304048	9TH ID HIGH TECHNOLOGY TEST BED (HTTB)
304049	PROVISION OF INDUSTRIAL FACILITIES
304050	LAYAWAY OF INDUSTRIAL FACILITIES
304051	MANUFACTURING TECHNOLOGY PROGRAM
305005	SEMITRAILER, B/B CONT 22 1/2 T M871 C/S
305008	SEMITRAILER, VAN, ELECTRONIC, 6T, 2W, M373A2
305014	TRAILER, HEAVY, EXPANDED MOBILITY
305016	COMMERCIAL UTILITY CARGO VEHICLE
305019	TRUCK, 10T, 8X8, ABT
305023	ITEMS LESS THAN \$900,000 (TAC VEH)
305024	PASSENGER CARRYING VEHICLES
305025	GENERAL PURPOSE VEHICLES

*** BLINS NOT ASSOCIATED WITH SYSTEMS ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
305026	SPECIAL PURPOSE VEHICLES
305027	SPARES AND REPAIR PARTS(TAC)
305028	PRODUCTION BASE SUPPORT(TAC)
305030	JCSE EQUIPMENT(USREDCOM)
305031	CLASSIFIED PROJECT 9WW
305032	CABLE ORDERWIRE UNIT(COU) T5-3647
305039	DIGITAL DATA MODEM, MD-1065
305042	GROUP MODEM(GM)MD-1026
305043	HI-SP CAB DR MOD(HSCDM)MD-1024
305044	HI-SP PULSE RESTOR(HSPR)TD-1219
305046	LOW SP CAB DR MOD(LSCDM)MD-1023
305047	LOW SP PULSE RESTOR(LSPR)TD-1218
305048	MAINTENANCE SHELTER, AN/ARM-164
305049	MASTER GROUP MUX(MGM), TD-1237
305051	ORDERWIRE CONTROL UNIT(OCU) I
305052	ORDERWIRE CONTROL UNIT(OCU) II
305055	REMOTE LOOP GP MUX(RLGM), TD-1233
305056	REMOTE LOOP GP MUX-COM(CRLGM-CDM), MD-1025
305057	REMOTE MUX COMBINER(RMC), TD-1234
305060	TAC DIG FAX(TDF)AN/UXC-4
305061	TRUNK GROUP MUX(TGM), TD-1236
305066	RADIO TERMINAL, AN/TRC-170(V)III
305067	MOD OF IN-SVC EQ(TRI-TAC)
305070	CABLE ASSEMBLY,CX-1123/6
305073	COMMUNICATIONS CENTRAL, AN/TSC-99
305075	DATA MULTIPLEXER, TD-1069
305077	DIGITAL MESSAGE ENTRY DEVICES(CSC)
305078	HAND CRANK GENERATOR, 6-76
305079	HF RADIO,AN,GRC-193
305080	HF RADIO,AN/PRC-104
305081	AN/TRQ-35 CHIRP SOUNDER
305086	AN/TRC-113 RADIO REPEATER
305089	RADIO SET, AN/GRC-103
305090	RADIO SET,AN/PRC-70
305092	RADIO SET AN/VRC-12
305094	HALF-RHOMBIC ANTENNA,OE-303
305095	LOG PERIODIC DIRECTIONAL ANTENNA,OF-314
305096	TEST SET,AN/PRM-34
305098	CSEP ANT AS 2259
305100	RADIO TERMINAL AN/TRC-145
305104	STEER NULL ANT PROC,CP-1380
305106	TELEPHONE,FIELD,TA-838
305111	FM MULTIPLEXER TD-1289
305112	MOD OF IN-SVC EQUIP(CSC)
305113	ITEMS LESS THAN \$900,000 (CSC-C-E)
305117	AR TELECOM AUTO PR(ATCAP)
305118	C-E FACILITIES/PROJECTS
305119	ELECTROMAG COMP PROG(EMCP)
305121	ITEMS LESS THAN \$900,000(STAR-NDCS)
305122	SECURE VOICE, IMPROVEMENT PGM
305123	TRANSMISSION MEDIA(DCS)

*** BLINS NOT ASSOCIATED WITH SYSTEMS ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
305124	WW TECH CON IMP PR(WWTCIP)
305125	DIGITAL EQUIPMENT(DSCS)
305126	INTERCONNECT FACILITY(DCSC)
305127	JAM RESISTANT COM(SATCOM)
305129	MED TRNS TERM EQUIP,AN/GSC-39(V)1
305130	SPREAD SPECT MULTI ACCESS(DSCS)
305131	DSCS OPNS CONTROL SYSTEM(DOCS)
305132	MOD IN-SVC EQUIP(DSCS)
305139	MOD IN-SVC EQUIP(TAC STAT)
305140	EU COM C3 SYSTEM(NWS)
305141	EU COM STAT WR HQ(SW HQ)
305142	AUTO KEY DC HGX-83/TSEC
305144	SEC VO IMPRV PRG(COMSEC)
305145	BERDAN KGV-9(MEM)
305146	DED LOOP ENCRYP DEV KG-84
305150	ELEC TRAN DEV,KYK-13/TSEC
305151	INT LEV T SET TSEC/ST-34
305154	MSG ENCYPT MODULE KN-2(MABREY)
305155	MONITORING EQUIPMENT(COMSEC)
305156	NET CON DEV KYX-15/TSEC
305158	SPEECH SECUR EQ TSEC/KY-58
305159	SPEECH SECUR EQ TSEC/KY-65
305160	TEMPEST(COMSEC)
305163	UMSTEAD CC(C1-11-1)
305164	UMSTEAD RT(C1-11-2)
305165	BATSON I,TSEC/C1-14
305166	ITEMS LESS THAN \$900,000(COMSEC)
305167	BASE COMM(FORSCOM)
305168	BASE COMM(EU COM)
305169	BASE COMM(PACOM)
305171	TMDE MODERNIZATION
305176	MOD IN SVC EQ(INT SPT)
305177	INTELLIGENCE COMMUNICATION EQUIP
305178	ITEMS LESS THAN \$900,000(INT SPT-C-E)
305179	TROJAN
305180	SIGINT SIMULATOR
305181	SOFTCOPY IMAGERY TRAINING DEVICE
305182	INTELLIGENCE DATA HANDLING SYS(IDHS)
305183	TECH RECON AND SURV SYS(TECRAS)
305184	ITEMS LESS THAN \$900,000(GDIP-C-E)
305185	VERT INSTL AUTO BASELINE(VTABLE-BASOPS)
305187	DARCOM FIVE YEAR ADP PROGRAM
305188	TRADOC AUTOMATION
305190	ADPE FOR NON TACT MGT INFO SYS
305199	WW MIL COM & CONT SYS ADPE
305200	AFRTS(AUDIO VISUAL)
305202	ITEMS LESS THAN \$900,000(A/V-C-E)
305205	MANPACK RADIO OF SYSTEM(MRDFS)
305206	PIRANHA,APPLIQUE JAMMER MOD KIT
305209	CHARGER,RADIAC DETECTOR PP-4370/PD
305210	BATTERY CHARGER,PP-7286/U

*** BLINS NOT ASSOCIATED WITH SYSTEMS ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
305213	METEOROLOGICAL DATA SYSTEM(FAMAS)
305217	INTRUSION DETECTION DEVICES
305221	NIGHT SIGHT, INFRARED, AN/TAS-4
305223	NIGHT VISION GOGGLES AN/PVS-5
305233	TACTICAL DOSIMETER, IM-185
305234	TAC ELEC SURV SYS
305236	MODIFICATION OF IN-SVC EQ(TAC EL)
305237	ITEMS LESS THAN \$900,000 (TACT ELEC-C-E)
305240	TEST STATION 00-290(VII)MSM
305241	EQUIP REPAIR FAC(ERF)
305242	PRODUCTIVITY INVESTMENT FUNDING
305243	SPARES AND REPAIR PARTS(TELECOM-C-E)
305244	QUICK RETURN ON INVESTMENT(QRIP)PGM
305245	SPARE/REPAIR PARTS(COMSEC)
305246	SPARES AND REPAIR PARTS(OTHER C-E)
305248	PRODUCTION BASE SUPPORT(C-E)
305250	AIR CONDITIONERS, VARIOUS SIZES, CAPACITIES
305251	ALARM, CHEMICAL AGENT, AUTO, PORT, M8 SERIES
305252	DETECTOR, CHEMICAL AGENT, M43A1
305263	COMPRESSOR, AIR, RCP, 5 CFM, 175 PSI
305267	DECONTAMINATE APP PWR DR LT WT XM17
305269	DETECTION-WARNING SYSTEM BIOLOGICAL
305270	SIM DET CHEM AGENT AUTO ALARM XM81
305272	DIVING EQUIPMENT
305276	FORWARD AREA REFUELING EQUIPMENT(FARE)
305279	HOSELINE OUTFIT FUEL HANDLING
305281	MINE CLEARING ROLLER
305282	MODULAR, COLLECTIVE PROTECTIVE EQUIP
305283	COMBAT ZONE HOSPITAL EQUIP (C2H)
305284	POSITION/AZIMUTH DETERMINING SYS (PADS)
305285	PROT OUTFIT, MICROCLIMATE CONTROLLED
305286	PUMP ASSY LIQ GAS WHL 4 IN OUTLET, 350 SPM
305295	TANK AND PUMP UNIT, LIQ DISP, F/TRK MOUNTING
305296	TANK ASSEMBLY, FAB, COLLAPSIBLE, POL 100006
305298	TACTICAL WATER DISTRIBUTION SYS
305300	TAG, PRINTING & BINDING EQUIPMENT
305306	WATER SUPPORT FOR THE RDF
305307	ITEMS LESS THAN \$900,000 (CS EQ-OTH)
305308	MODIFICATIONS OF IN SERVICE EQUIP (CSE)
305310	COMPRESSOR AIR ROTARY, 250 CFM, 100 PSI
305313	SMALL EMPLACEMENT EXCAVATOR (SEE)
305316	DRILL, MACH. WELL RTV, TRL, DSLS-7/80 1500 FT
305317	GRADER ROAD MOTORIZED HVY 6X4 (CCE)
305318	LOADER, SCOOP TYPE, DD 4WHL, 2 1/2 CU YD
305319	PNEUMATIC TOOL COMPRESSOR OUTFIE 250 CFM TRL
305323	SCRAPER, EARTHMOVING, 14-180 CU YD
305327	MODS OF IN SERVICE EQUIP (CONST EQ)
305328	ITEMS LESS THAN \$900,000 (CONST EQ-OTH)
305331	RAILWAY CAR, FLAT, 140 TON
305334	ITEMS LESS THAN \$900,000 (FLT.RAIL EQ)
305335	GENERATORS AND ASSOCIATED EQUIPMENT

*** BLINS NOT ASSOCIATED WITH SYSTEMS ***

<u>BLIN</u>	<u>NOMENCLATURE</u>
305341	TRUCK, FORK LIFT, DE, PT, RT, 10000 LB
305350	MODIFICATIONS OF IN SERVICE EQUIP (MHE)
305351	ITEMS LESS THAN \$900,000 (MAT HAND EQ)
305352	MEDICAL SUPPORT EQUIPMENT
305353	CALIBRATION SET SUPPORT
305354	SPARES AND REPAIR PARTS (OTHER)
305355	NATIONAL TRAINING CTR SUP
305356	SPECIAL EQUIPMENT FOR USER TESTING
305357	QUICK RETURN ON INVESTMENT PROGRAM
305358	PROD ENHANCING CAPITAL INVEST PRGM
305359	PRODUCTIVITY INVESTMENT PROGRAM
305361	TRAINING DEVICES, NONSYSTEM
305362	BASE LEVEL COML EQUIPMENT
305363	PRODUCTION BASE SUPPORT (OTHER)

CODE LIST FOR USE WITH THE FOLLOWING BLIN ANALYSIS (Pages F-8 - F-11)

<u>CODE</u>	<u>SYSTEM CLASS</u>
A	Aircraft
B	Missiles
C	Electronics
D	Tracked Combat Vehicles
E	Cannon Artillery, Mortars, and Guns
F	Engineering and Related Systems
G	Ground Vehicles
H	Ammunition
I	Other
J	Health Care
K	Installation Management
L	Personnel and Related Services
M	Support Outside Army
N	Defense Research/Advanced Tech Development
O	Intelligence Activities
P	Army Headquarters
Q	Training
R	Ground Combat/Combat Support
S	Transportation/Traffic Management
T	Engineer Services/Civil Works
U	Police and Security
V	Production Base Support
W	Central Supply and Maintenance

UNIDENTIFIED BLIN ANALYSIS

<u>BLIN</u>	<u>MOST LIKELY SYSTEM CLASS(ES)</u>
301001	Q, R, S, W
301003	O, Q, R, T
301006	O, Q, R, S, T
301013	O, Q, R, S, U
301014	O, Q, R, T
301015	O, Q, R, T
301020	Q, R, S, W
301029	A
301033	Q, R
302023	N, Q, R
302025	P, V
302026	B
303014	Q, S, R
303017	Q, S, R
303021	Q, R
303025	D, G
303027	D, G, V
303031	Q, R
303033	Q, R
303036	Q, R
303039	P, Q, R
303040	P, Q, R
303045	D, G, V
304047	H
305005	M, O, W
305008	M, O, W
305014	M, O, W
305016	S, W
305019	M, O, W
305025	P, W
305026	P, W
305028	C, V
305030	R
305031	O
305032	K, L, O
305042	K, L, O
305043	K, L, O
305044	K, L, O
305046	K, L, O
305047	K, L, O
305048	K, L, W
305049	K, L, O
305051	K, L, O
305052	K, L, O
305055	K, L, O
305056	K, L, O
305057	K, L, O
305060	K, L, O
305061	K, L, O
305066	O, U
305067	K, L, O

UNIDENTIFIED BLIN ANALYSIS

<u>BLIN</u>	<u>MOST LIKELY SYSTEM CLASS(ES)</u>
305070	K, L, 0
305073	K, 0, U
305075	K, L, 0
305077	K, L, P
305078	K, L, 0
305079	K, L, 0
305080	K, L, 0
305081	K, L, 0
305086	K, L, 0
305089	K, L, 0
305090	K, L, 0
305092	K, L, 0
305094	K, L, 0
305095	K, L, 0
305096	K, L, 0
305098	K, L, 0
305100	K, L, 0
305104	K, L, 0
305106	R
305111	K, L, 0
305112	K, U
305117	K, L, 0
305118	K, T
305119	K, L, 0
305122	K, L, 0
305123	K, L, 0
305124	K, L, 0
305125	K, L, 0
305126	K, L, 0
305127	K, L, 0
305129	K, L, 0
305130	K, L, 0
305131	K, L, 0
305132	K, L, 0
305139	K, L, 0
305140	K, L, 0
305141	K, L
305142	K, L, 0
305144	K, L, 0
305145	K, L, 0
305146	K, L, 0
305150	K, L, 0
305151	K, L, 0
305154	K, L, 0
305155	K, L, 0
305156	K, L, 0

UNIDENTIFIED BLIN ANALYSIS

<u>BLIN</u>	<u>MOST LIKELY SYSTEM CLASS(ES)</u>
305158	K, L, O
305160	K, L, O
305163	K, L, O
305164	K, L, O
305165	K, L, O
305167	K, O
305168	K, O
305169	K, O
305171	N, T, W
305176	N, T
305177	K, O
305179	K, L, O
305180	K, L, O
305181	Q
305182	K, O
305183	K, L, O
305185	K, L, O
305187	P
305188	P
305190	K, P
305199	P
305200	K, L, O
305205	K, L, O
305206	K, L, O
305209	K, L, O
305210	R, W
305213	K, L, O
305217	K, U
305221	O, R
305223	O, R
305233	K, L, O
305234	R, T
305240	K, L, O
305241	N, W
305242	N, T
305244	N, T, W
305248	C, V
305250	K
305251	R
305252	R
305263	K
305267	R
306269	R
305270	R
305272	R
305276	R, W
305279	R, W
305281	R

UNIDENTIFIED BLIN ANALYSIS

<u>BLIN</u>	<u>MOST LIKELY SYSTEM CLASS(ES)</u>
305282	R
305283	J, R
305284	O, R
305285	R
305286	T, W
305295	T, W
305296	T, W
305298	T, W
305300	K, W
305306	K, R
305310	T, W
305313	T, W
305316	T, W
305317	T, W
305318	T, W
305319	T, W
305323	T, W
305331	S, W
305334	S, W
305335	T, W
305341	W
305350	N, T, W
305352	J
305353	P, R, T
305354	W
305355	M, Q
305356	Q, T, W
305357	N, T, W
305358	N, T, W
305359	N, T, W
305361	Q
305362	T, W
305363	I, V

END

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